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ZOOPLANKTON DISTRIBUTION AND ASSOCIATED BIOLOGICAL, PHYSICAL AND CHEMICAL DATA: BARKLEY SOUND, VANCOUVER ISLAND, APRIL 1987 AND MAY 1988 (MASS Program)

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ABSTRACT

Forbes, J.R., D.L. Mackas, R.M. Brown, K.L. Denman and E.A. MacIsaac. 1990. Zooplankton distribution and associated biological, physical and chemical data: Barkley Sound, Vancouver Island, April 1987 and May 1988 (MASS Program). Can. Data Rep. Hydrogr. Ocean Sci. 76: 139 p.

Data collected during April 1987 and May 1988 in Barkley Sound, southwest Vancouver Island, as part of the Marine Survival of Salmon (MASS) Program are presented. The objectives of this component of MASS were to survey the distribution, abundance and size frequency of zooplankton and investigate underlying biological and oceanographic processes controlling the zooplankton community. For 1988, maps of the surface distribution of zooplankton biomass by size category, salinity and temperature, obtained by a flow-through sampling system, are provided. Zooplankton identity, abundance and size distribution determined from vertical net haul and BIONESS samples, together with biological, physical and chemical observations from CTD/rosette casts are reported. Data from 1987 are restricted to zooplankton identity, abundance and size distribution determined from vertical net haul samples.

Key words: data, zooplankton, oceanographic, Barkley Sound, Vancouver Island

RÉSUMÉ

Forbes, J.R., D.L. Mackas, R.M. Brown, K.L. Denman and E.A. MacIsaac. 1990. Zooplankton distribution and associated biological, physical and chemical data: Barkley Sound, Vancouver Island, April 1987 and May 1988 (MASS Program). Can. Data Rep. Hydrogr. Ocean Sci. 76: 139 p.

Le document présente les données recueillies en avril 1987 et mai 1988 dans le détroit Barkley, au sud-ouest de l'île de Vancouver, dans le cadre du Programme de survie du saumon en mer (MASS). L'objet de cet élément du Programme était de relever la répartation, l'abondance et la fréquence des tailles de zooplancton et d'étudier les processus biologiques et océanographiques qui influent sur le zooplancton. Le document renferme des cartes de répartition en surface de la biomasse de zooplancton, selon la taille, la salinité et la température, établies à partir d'échantillonnages par instrument d'arpentage électronique. On y indique le type de zooplancton, l'abondance et la répartition par taille, déterminées à partir d'échantillons prélevés verticalement au moyen de filets et obliquement au moyen de système BIONESS, et à partir d'observations biologique, chimiques et physiques découlant de l'utilisation d'une système CTD/rosette. Les données recueillies en 1987 sont limités à le type, l'abondance et la répartition par taille de zooplancton, déterminées à partir d'échantillons prélevés verticalement.

Mot-clés: données, zooplancton, océanographiques, détroit Barkley, île de Vancouver

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INTRODUCTION

The Marine Survival of Salmon (MASS) Program is an inter-disciplinary study focussed on the relationships between physical and biological oceanographic events and the dispersal and survival of salmon during their early sea life. The program was stimulated by the need to improve forecasting for Pacific salmon returns. The return of adults appears to be strongly influenced by environmental factors and it is considered likely that these factors are operating on juveniles. The objective of the MASS program is to evaluate whether or not the variation in return rate is due to these effects on juveniles.

A major effort within the MASS program has been directed at processes within Barkley Sound, on the west coast of Vancouver Island. The Ocean Ecology section at the Institute of Ocean Sciences (IOS) has contributed to the research in Barkley Sound by surveying the distribution, abundance and size frequency of zooplankton, and investigating underlying biological and oceanographic processes controlling the zooplankton community. This report describes the results of an intensive study undertaken during mid-May 1988, with zooplankton data from an initial survey in late April 1987 conducted by the West Vancouver Laboratory of the Department of Fisheries and Oceans. The results of two additional surveys conducted in early May and early June 1989 are reported in Forbes et al. (1990).

SAMPLING AND ANALYTICAL METHODS

1. Project design

The initial survey in 1987, for which we report zooplankton data, focussed on description of inlet-scale spatial variability of size-fractioned primary productivity and phytoplankton. Other results are reported by MacIsaac et al. (1990). Vertical net hauls were conducted at nine stations (Fig. 4) throughout Barkley Sound to characterize the size distribution of the zooplankton. Detailed taxonomic identification and enumeration of animals was undertaken on samples from four of these locations.

The types of studies done in 1987 were repeated in 1988, but we placed an increased emphasis on understanding the distribution and size structure of the zooplankton community. Nocturnal continuous underway mapping was conducted throughout Barkley Sound (Fig. 1-3) to obtain the surface distribution of zooplankton biomass by size category, salinity and temperature. Navigation was by Loran-C and radar. This mapping was augmented by a dense network (Fig. 5) of vertical net hauls, to obtain areal measurements of size-fractioned zooplankton biomass, and a series of oblique tows (Fig. 6) in the upper 10m, the depth stratum in which migrating juvenile salmon are concentrated. At one location we conducted a time-series of tows with a Bioness (Fig. 7) multiple net system, which provided information on diel variability in depth distribution of zooplankton. An additional day and night pair of Bioness tows was obtained at a second station (Fig. 7).

The zooplankton data were supplemented with continuous profiles and discrete samples for physical, chemical and biological water properties, collected with a CTD/rosette instrument (Fig. 8).

2. Continuous underway mapping

Continuous underway data of zooplankton abundance and size categories, salinity, temperature and chlorophyll fluorescence were collected with a flow-through electronic particle counting system (EPCS) (Mackas et al. 1981) coupled to temperature, conductivity and fluorescence sensors (Mackas et al. 1980). Water was pumped from a nominal depth of 3m via a through-hull fitting in the bow-thruster compartment. Mapping was performed at night to improve sampling of vertically migrating zooplankton. Data are averaged over 3km, and plotted (Fig. 12-20) along the line tracks at the mid-point of each 3km bin.

The zooplankton sensor counts and sizes particles with an equivalent spherical diameter of 0.3 - 3.0mm (approximately 0.08 - 8.0mm^3). Resistive particles passing through the sensor cause amplitude modulation of an A.C. excitation signal. Output pulses derived from the demodulated signal are an approximately linear function of particle volume, which allows particles to be assigned to one of ten size categories. The sensor contains four independent sensing tubes to allow for a high flow rate (approximately 25$L.min^{-1}$). Precision of the size estimates ranges from about ±40% for the smallest detected particles to ±10% for the largest. The size categories of zooplankton are plotted as histograms, with the x axis as body size and the y axis as the amount ($mm^3.m^{-3}$).

Periodic discrete water samples were taken from the system outflow for calibration of the temperature, conductivity and fluorescence sensors. However, high fluorescence interference from dissolved organic matter and non-living particulates rendered the fluorescence data suspect for deriving estimates of chlorophyll concentrations and the fluorescence data are not reported.

3. CTD/rosette casts and discrete water samples

Vertical profiles of physical, chemical and biological data were collected with an integrated array of instruments, including CTD, *in situ* fluorometer, transmissometer, and irradiance sensor, mounted in a frame attached to a rosette sampler. Specific sensors for this cruise were a Guildline Model 8701 analog CTD, Variosens III fluorometer, configured to measure chlorophyll fluorescence, Sea Tech 25cm path length transmissometer to measure beam attenuance, and Licor 193SB spherical quantum irradiance sensor, to measure *in situ* photosynthetically active irradiance. Outputs from these sensors were multiplexed, digitized and communicated to the ship. A microcomputer stored data and provided a real-time display of temperature, salinity and chlorophyll fluorescence. During a typical cast of the instrument package, it was lowered at a rate of 0.5 - 1$m.s^{-1}$ and the depths to

collect water samples were determined from data acquired on the down-cast. The rosette sampler held an array of ten Niskin bottles. One or more of these bottles was tripped on the up-cast and data from all sensors were sampled and recorded at the time the bottle closed. Water collected by the Niskin bottles was used for discrete samples of salinity, chlorophyll a, dissolved inorganic nutrients, bacteria and phytoplankton.

The manufacturer of the CTD specifies an accuracy of ±0.01°C, with a resolution of 0.003°C for temperature, an accuracy of ±1.25dBar and a resolution of 0.25dBar for pressure, and an accuracy of ±0.01 equivalent salinity, with a resolution of 0.005. For % transmission, the manufacturer specified accuracy and resolution to be 0.5%, while the accuracy of the *in situ* PAR measurement is reported to be ±7.0% and the resolution to be 0.5%.

4. Salinity

Salinity samples were collected in 250mL bottles which were rinsed three times, capped and stored for later analysis at IOS. Salinity samples were analyzed on a Guildline Autosal (Model 8400A) standardized against Standard Sea Water (Standard Sea-water Service, Institute of Oceanographic Sciences, Wormley, Godalming, England). Batch P95 8/3 1983 was used, with a stated K_{15} = 0.99997 (chlorinity = 19.373). Data are reported in practical salinity units (psu) (Lewis and Perkin 1978).

Precision (pooled variance of replicate samples) of this method has been estimated by Macdonald et al. (1988) to be 0.005.

5. Chlorophyll a

Extracted chlorophyll a was determined by fluorometry (Parsons et al. 1984). Water samples (generally 50mL) were filtered in duplicate onto 25mm diameter Whatman GF/F glass fiber filters with a vacuum of <100mm Hg. Just before filtration was completed approximately 1mL of $MgCO_3$ suspension was added to the sample and the sides of the filter funnel were rinsed with filtered seawater. Chlorophyll was extracted in 90% aqueous acetone by grinding the filters in a tissue grinder. The extract was clarified by filtration through a glass fiber filter and the fluorescence measured in a Turner Designs 10 fluorometer. The sample was acidified with two drops of 1.5N HCl and the fluorescence was redetermined after the reading had stabilized to obtain a phaeopigment correction factor.

Chlorophyll a content was calculated from the equations in Parsons et al. (1984). The fluorometer was previously calibrated against a Perkin-Elmer Hitachi 200 spectrophotometer using a standard prepared from pure crystalline chlorophyll a (Sigma Chemical Co.). Chlorophyll concentrations in the calibration samples were calculated using the equations of Jeffrey and Humphrey (1975). The mean coefficient of variation of this method is estimated to be 4.9% (Forbes et al. 1988).

6. Inorganic nutrients

Samples for the analysis of dissolved nitrate plus nitrite, ammonium, orthophosphate and reactive silicate were analyzed using Technicon II Auto-Analyzer instruments. Processing of samples was handled in two ways.

6.a Frozen samples (method A)

Samples for the analysis of dissolved nitrate plus nitrite and orthophosphate were collected in 50mL glass tubes with Teflon cap liners. Samples for dissolved reactive silicate were collected in 20mL polystyrene tubes, also with Teflon cap liners. All sample tubes had been previously acid-cleaned and were rinsed three times with sample before filling. All samples were quick frozen in an alcohol bath to -40°C and stored frozen until analysis.

A Technicon II Auto-Analyzer was used for the analyses, with Technicon Industrial Methods No. 186-72 W and 158-71 W (both revised June 1977) employed for nitrate plus nitrite and reactive silicate respectively. The modification of the Technicon method by Brynjolfson (1973) was used for the analysis of orthophosphate. All glassware and plasticware used was acid-washed overnight in 1 M hydrochloric acid and rinsed three times with deionized (Milli-Q) water before use. Acid-washed sample cups were rinsed with sample before use. The recommendations of Macdonald et al. (1986) regarding the thawing of samples were followed and the samples were mixed thoroughly prior to analysis. A synthetic seawater wash solution and standards containing 3.2% sodium chloride (equivalent to 28 psu) were used for all samples except a small number of low salinity samples. These samples were analyzed using a synthetic seawater wash and standards containing 1.6% sodium chloride (equivalent to 14 psu). The low salinity samples were 41-6, 76-8, 76-9, 80-9, 82-9 and 85F-9, where the first number is the station identifier and the second is the bottle identifier.

Working calibration standard solutions were calibrated against substandards prepared from certified Sagami nutrient standards. The calibration standards were prepared fresh every one or two days and run at the beginning and end of each day, as well as after every 30 - 35 samples.

Concentrations of calibration standards used (in $\mu g\text{-at.}L^{-1}$) were:

NO_2+NO_3	PO_4	SiO_2
1.0	0.1	1.0
5.0	0.5	5.0
10.0	1.5	20.0
20.0	3.0	40.0
40.0	4.0	60.0

Turbidity samples were run on the orthophosphate channel (no reagents) for samples that were obviously turbid or of low salinity and sample concentrations were corrected accordingly.

The range of the method for nitrate plus nitrite is 0.1 to 140μg-at.L^{-1}, with a stated precision of ±0.19 at the 17μg-at.L^{-1} level (standard deviation of four replicates). For orthophosphate, the range of the method is 0.01 to 16μg-at.L^{-1}, with a stated precision of ±0.01 at the 1.3μg-at.L^{-1} level (standard deviation of four replicates). From a detection limit of 0.2μg-at.L^{-1} the range for reactive silicate extends to 300μg-at.L^{-1}. The stated precision of the method at the 16μg-at.L^{-1} level is ±0.14 (standard deviation of four replicates). Replicate subsamples representing at least 5% of the samples in each batch were analyzed as a check on method precision. In general, the precision of these replicates was within limits outlined for the respective methods.

6.b Direct analysis (method B)

Subsamples for nutrient analyses were removed directly from the Niskin bottle with an acid-washed syringe and gently filtered through acid-cleaned, combusted (460°C for 4 h) Whatman GF/F filters (mounted in 25 mm Millipore Swinnex® filter holders) into acid-washed polyethylene bottles. Nitrate plus nitrite, ammonium and silicate samples were analyzed immediately, while orthophosphate samples were stored frozen (-20°C) until analysis.

Nitrate plus nitrite and ammonium were determined following the procedures of Wood et al. (1967) and Slawyk and MacIsaac (1972), respectively. Silicate was determined following Armstrong *et al.* (1967), and orthophosphate according to Hager et al. (1968).

Precision of method B based on Technicon Industrial Methods specifications is:

	Mean	1 Std dev.	N
Ammonia	1.00	0.06	10
Nitrate	5.00	0.06	10
Silicate	2.00	0.01	10
Phosphate	1.00	0.02	10

8. Bacteria

For total counts of bacteria in seawater, water samples (20mL) were preserved with unbuffered formaldehyde to a concentration of 2%. They were stored at 4°C in the dark prior to counting. Abundance was estimated by the method of Hobbie et al. (1977), with slight modification. Duplicate subsamples were stained for five minutes with buffered acridine orange (0.1% in 0.02 Mol tris-hydroxymethylaminomethane, pH 7.2), to a final concentration of 0.02% (Bunch 1987), and filtered onto 0.2μm pore-size Nuclepore polycarbonate filters, previously dyed with Irgalin Black (0.2% solution in 2.0% v/v acetic acid). Prior to filtration of the subsample, 1mL of surfactant (0.001M Triton-X) was passed through the filter to avert cell clumping due to the hydrophobic

property of the Nuclepore filters. Triton-X was selected because it does not affect the background fluorescence. Enumeration was by epi-fluorescence microscopy, with subsample volume (typically 5mL) chosen to distribute between 20 and 100 cells per field. Ten randomly chosen fields were counted. If the ten fields contained less than 300 cells, additional randomly chosen fields were counted until this number was reached.

The proportion of dividing cells was determined using the guidelines of Hagstrom et al. (1979). Bacteria cells showing a region of invagination, but no clear separation, were functionally designated as dividing cells. In general, the procedure for counting described above was used. However, if the dividing cell number was low (20 to 50 cells per ten fields), then an additional ten fields were counted.

A series of control samples was prepared by serial dilution, in filtered seawater, of a natural sample of bacteria. These were preserved with formaldehyde as above. These controls were counted several times during the counting of samples to ensure that temporal systematic variations in the procedures were not occurring. The mean coefficient of variation for 121 sets of duplicate subsamples was 17% with a range of 4 to 61%.

9. Phytoplankton

Samples (250mL) were drawn from the Niskin bottles and preserved with acid Lugol's solution (Throndsen 1978). Identification and enumeration was by settling and inverted microscopy, as outlined in Hasle (1978). Specifically, each sample was shaken gently by hand for approximately 1 min. A subsample was then settled in a 10mL settling chamber, to yield between 100 and 300 cells or chains of the more abundant, medium-sized species present. Medium-sized and larger taxa were enumerated from the entire bottom at 250x magnification, unless numbers of abundant species exceeded 200. In this case, every second or every fifth transect was counted, depending on cell density. Smaller taxa occurring in large numbers were counted at 250x or 500x from two or more transects. The entire chamber was scanned for rare or exotic taxa.

10. Zooplankton

Vertical net haul samples were collected with a bongo net (57cm diam., 0.25mm mesh, black netting) from 250m, or approximately 5m above the bottom where the depth was <250m. One subsample from each bongo haul was preserved with buffered formalin for identification and enumeration (only four samples analyzed); the other was frozen in an alcohol bath to -40°C for size-fractioned biomass determination.
A series of oblique tows from 10m to the surface were also conducted with the bongo net. Samples were handled in the same manner as for the vertical hauls. Oblique tows through specific depth strata were performed with a BIONESS multiple opening and closing net system. A full tow consisted of up to seven samples, designated by station number and net number. For example, 52-2 represents the sample from net 2 at

station 52. Table 2 provides details of sample depths for each BIONESS sample. These samples were preserved with buffered formalin for identification and enumeration.

Size-fractioned biomass on frozen samples was determined as follows. Samples were thawed and passed through a stack of sieves with 4, 2, .85, .25 and .04mm mesh by gentle rinsing and backwashing in standing, filtered seawater. This was followed by a light rinse with isotonic ammonium formate (0.5N in deionized water) to remove salt. Subsamples were then filtered onto preweighed Whatman No.1 filter papers, dried for 24hr at 60°C, and the weight of the filter contents was determined. The .04mm sieve served as a check to detect animals passing through the .25mm mesh in a longitudinal direction. The occurrence of animals on this mesh is indicative of over vigorous sieving, requiring that the sample be re-sieved. The results are plotted (Fig. 9-11) in the form of histograms (g/m^2 for each sieve) on a map at station locations.

For identification and enumeration of zooplankton, preserved samples were initially passed through a 5mm sieve onto a 0.04mm sieve to remove the preservative and to separate the >5mm size fraction from the rest of the sample. The latter was visually examined for exotic taxa, which were removed for external verification of identity. Generally, all remaining individuals in this size fraction were identified to species, sex and developmental stage where possible. In the event of a very large number of individuals, this portion of the sample was subsampled to approximately 50 individuals. The remaining size fraction (0.04 to 5mm) was split to produce a subsample of no fewer than 300 individuals, which were identified and enumerated to genus, species, sex and developmental where feasible. All subsampling was performed with a Folsom splitter, which was regularly calibrated by splitting a known control sample. A complete list of taxa (Table 7) precedes the abundance data (Tables 8-10). In some cases taxa are staged, sexed, or both. For example, *Calanus marshallae* 1-4 refers to stages 1 to 4 and *C. marshallae* 6f to stage 6, female of this species. In the case of some higher taxa, size categories are specified, for example *Oikopleura* s1, s2 and s3. S1 indicates a length of less than 5mm, s2 between 5mm and 1cm, and s3 greater than 1cm.

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DATA SECTION 1

CONTINUOUS UNDERWAY MAPPING TRANSECTS AND STATION LOCATIONS

Fig. 1 OE8805 EPCS Line Track: 3 - 4 May 1988

Fig. 2 OE8805 EPCS Line Track: 6 - 7 May 1988

Fig. 3 OE8805 EPCS Line Track: 11 - 12 May 1988

Fig. 4 WV87 Station Locations (Vertical Net Hauls)

Fig. 5 OE8805 Station Locations (Vertical Net Hauls)

Fig. 6 OE8805 Station Locations (Oblique Net Hauls)

Fig. 7 OE8805 Station Locations (Bioness Net Hauls)

Fig. 8 OE8805 Station Locations (CTD/Rosette Casts)

(Note: map coordinates are in decimal degrees)

Fig. 1 OE8805 EPCS Line Track 3 - 4 May 1988

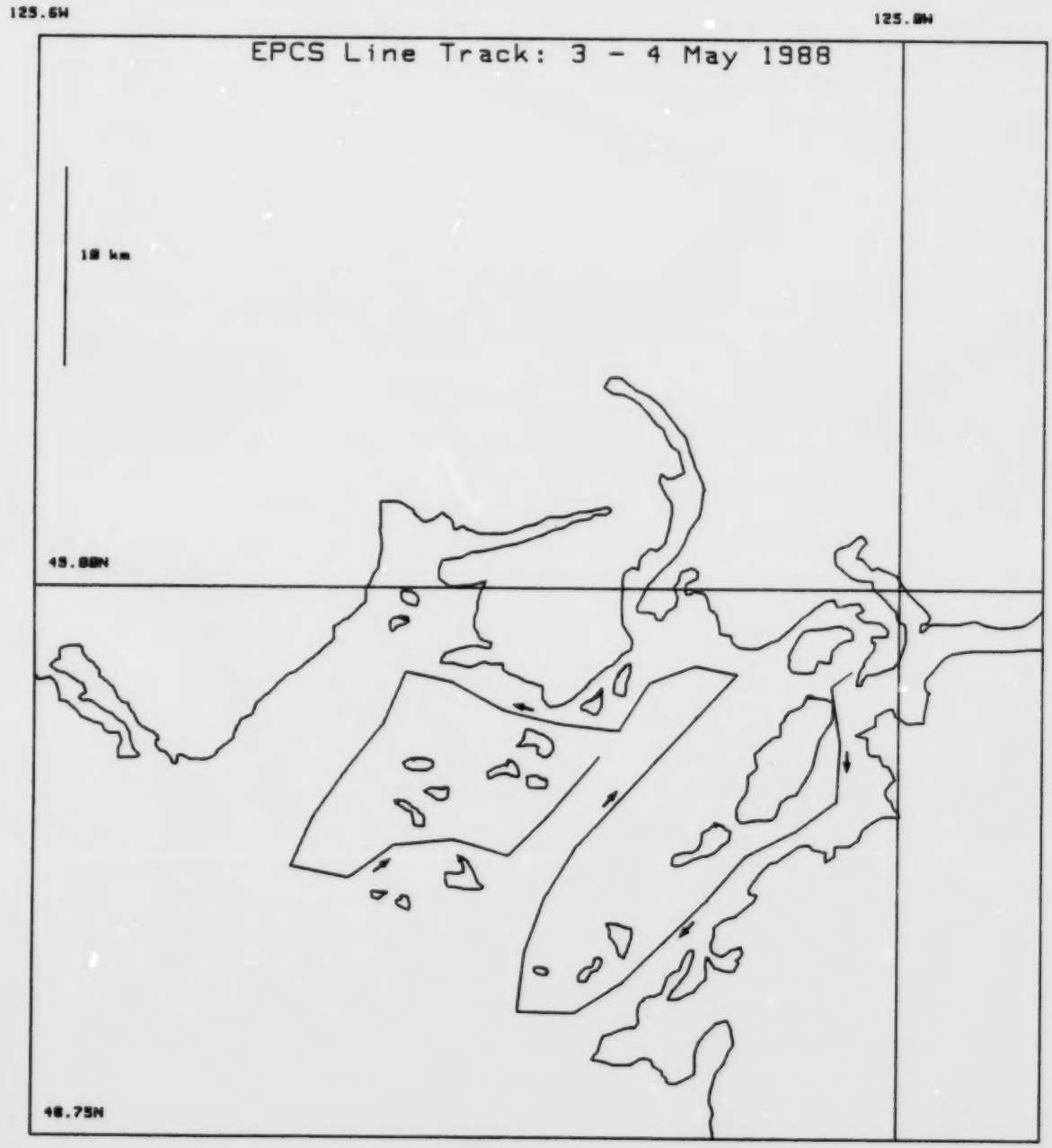


Fig. 2 OE8805 EPCS Line Track 6 - 7 May 1988

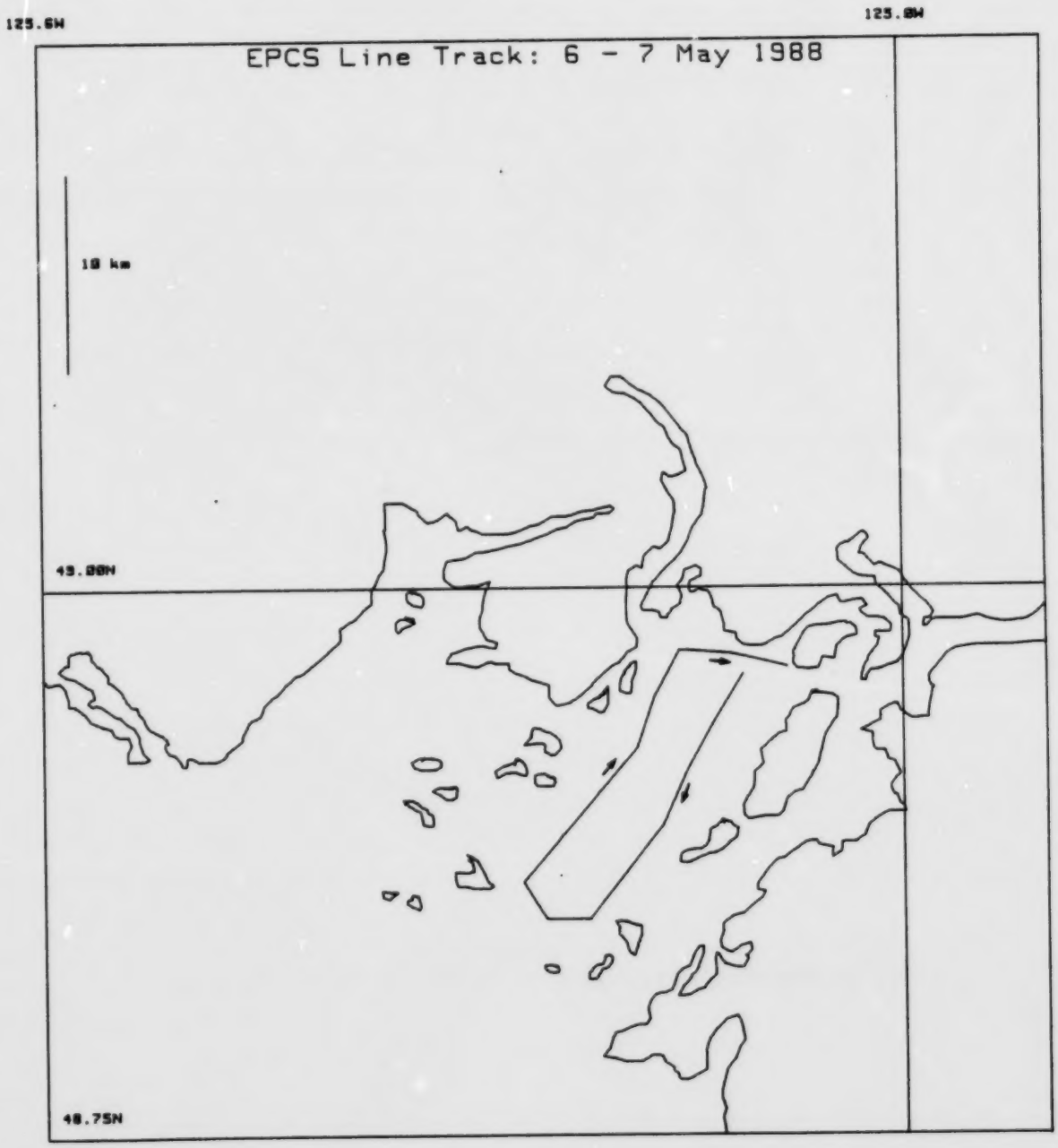


Fig. 3 OE8805 EPCS Line Track 11 - 12 May 1988

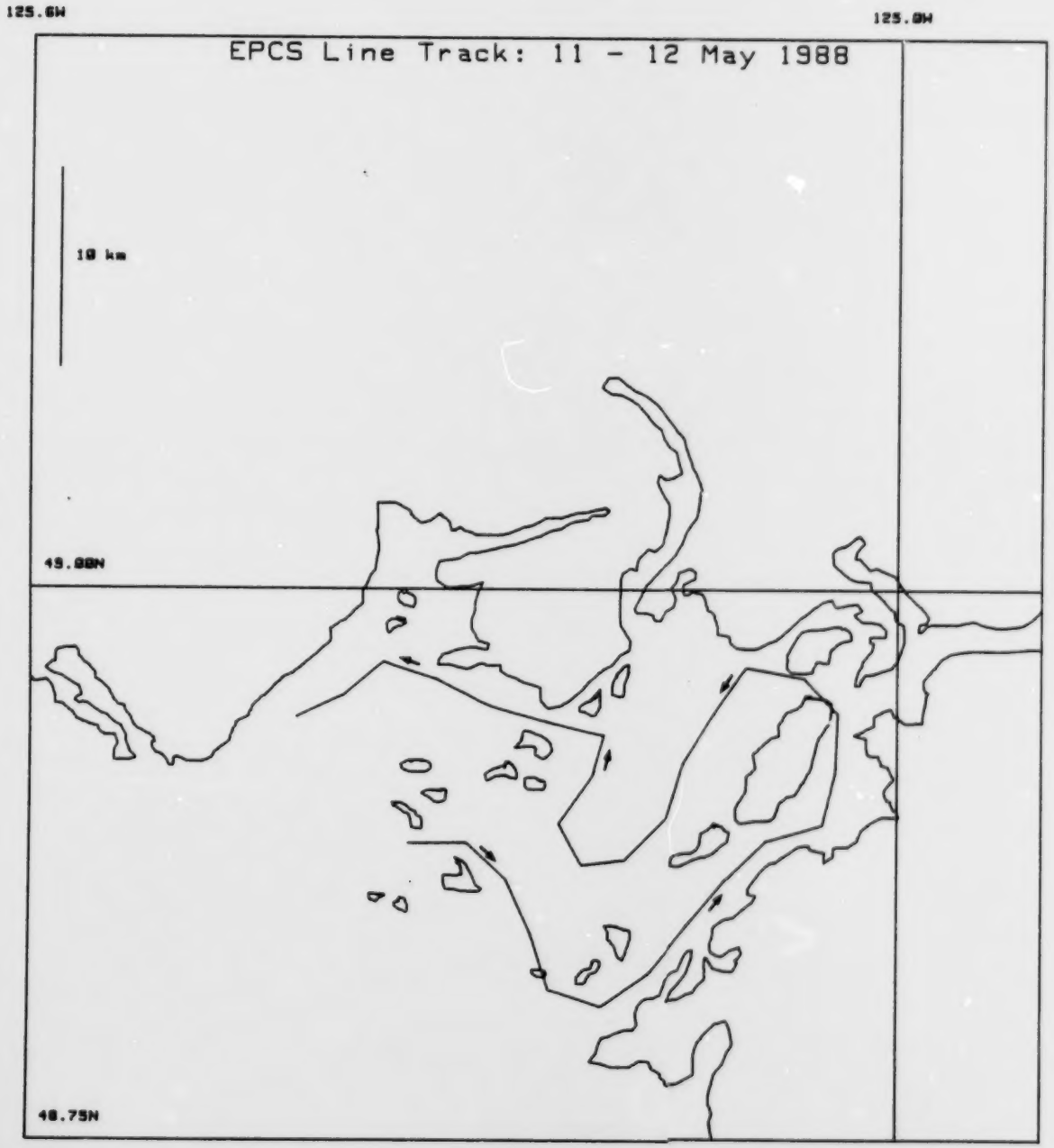


Fig. 4 WV87 Station Locations (Vertical Net Hauls)

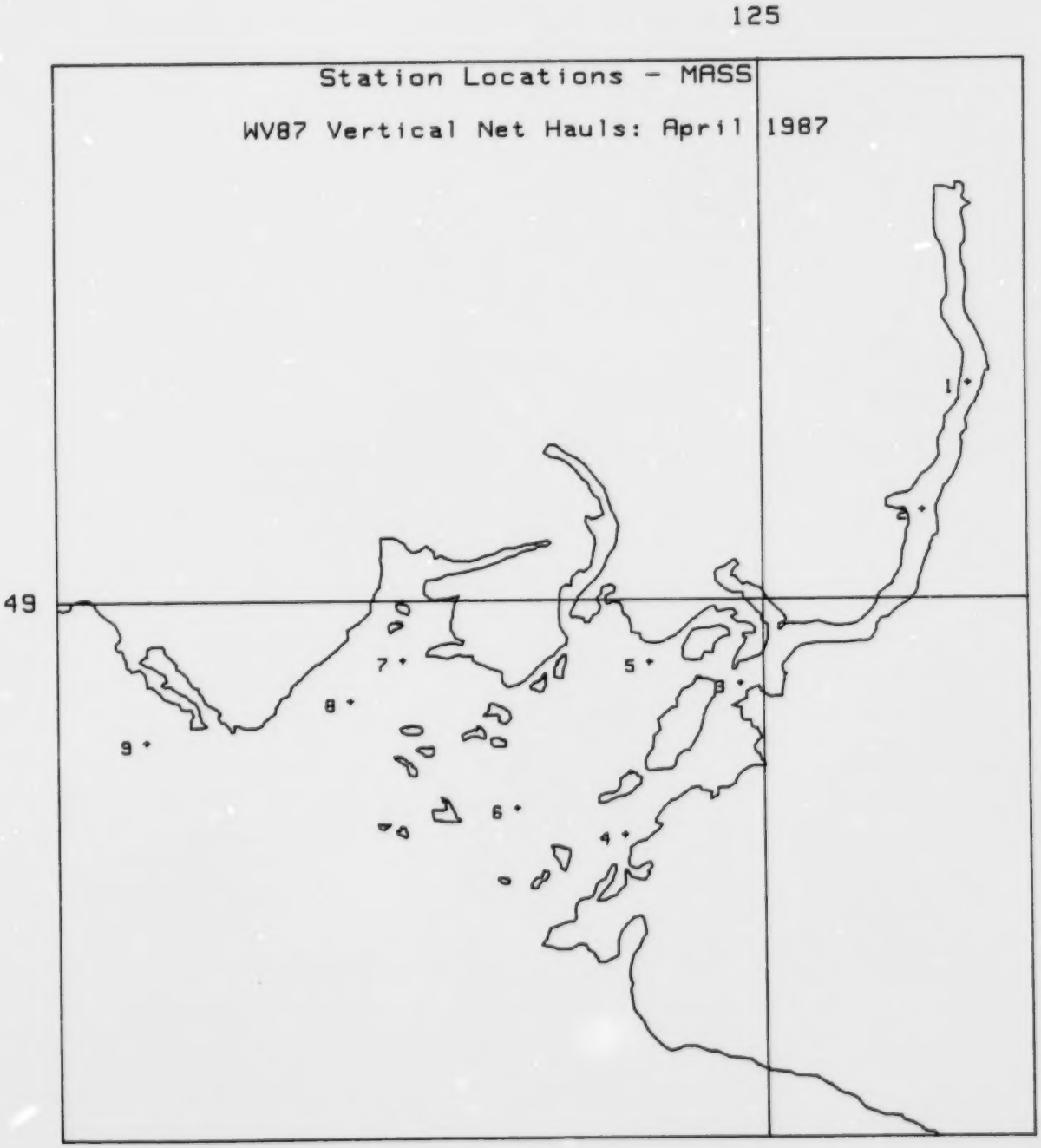


Fig. 5 OE8805 Station Locations (Vertical Net Hauls)

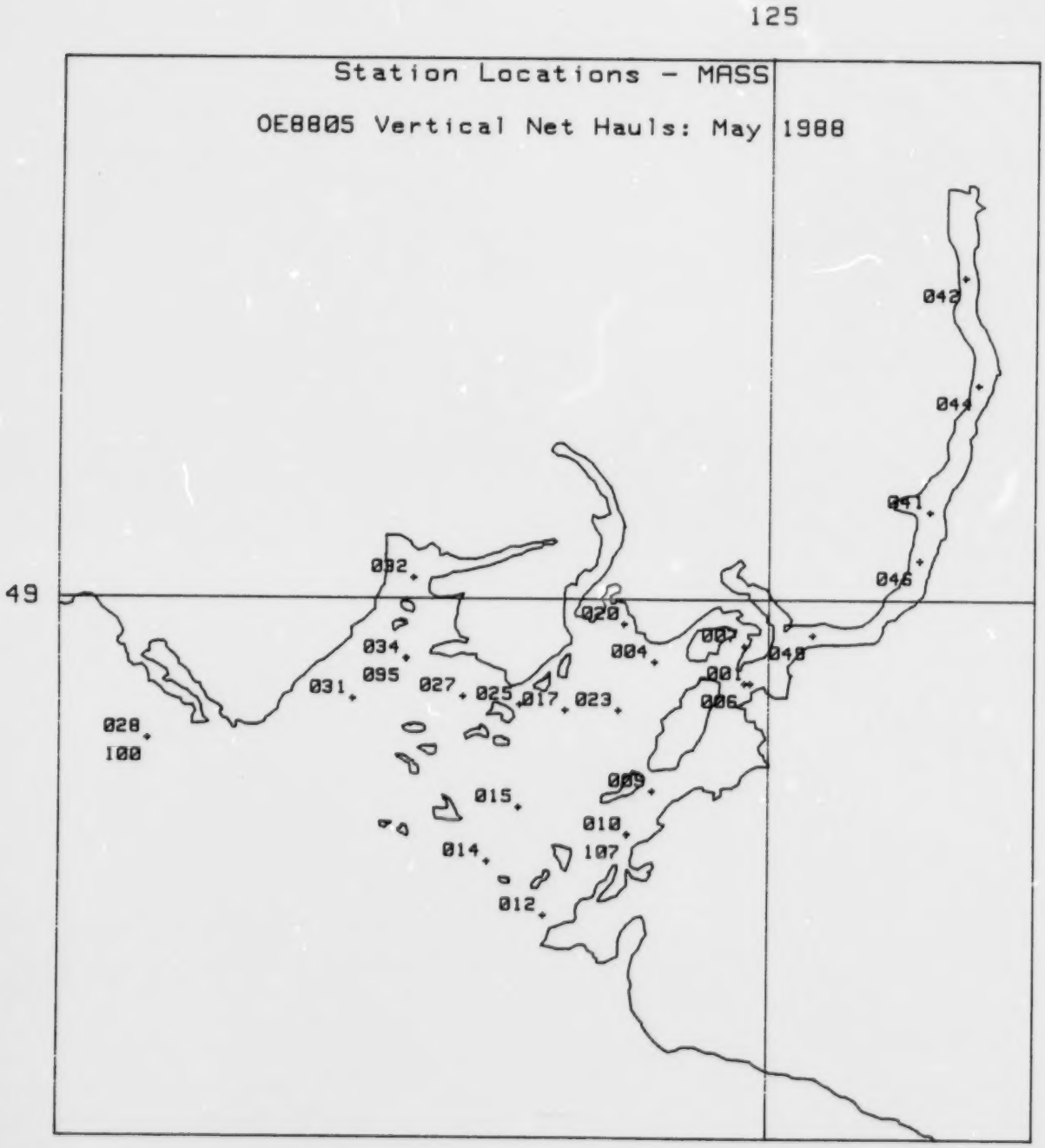


Fig. 6 OE8805 Station Locations (Oblique Net Hauls)

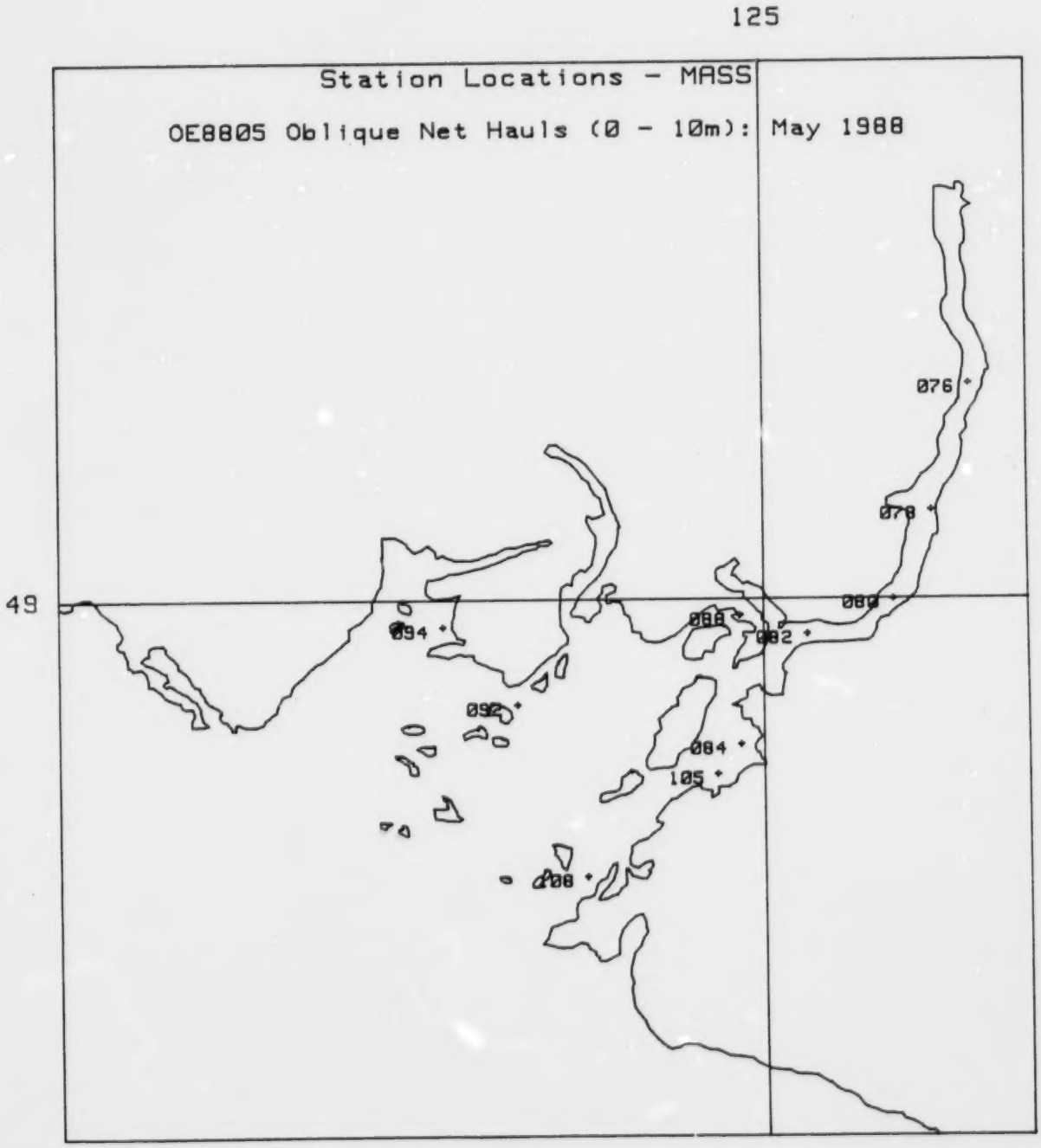


Fig. 7 OE8805 Station Locations (Bioness Net Hauls)

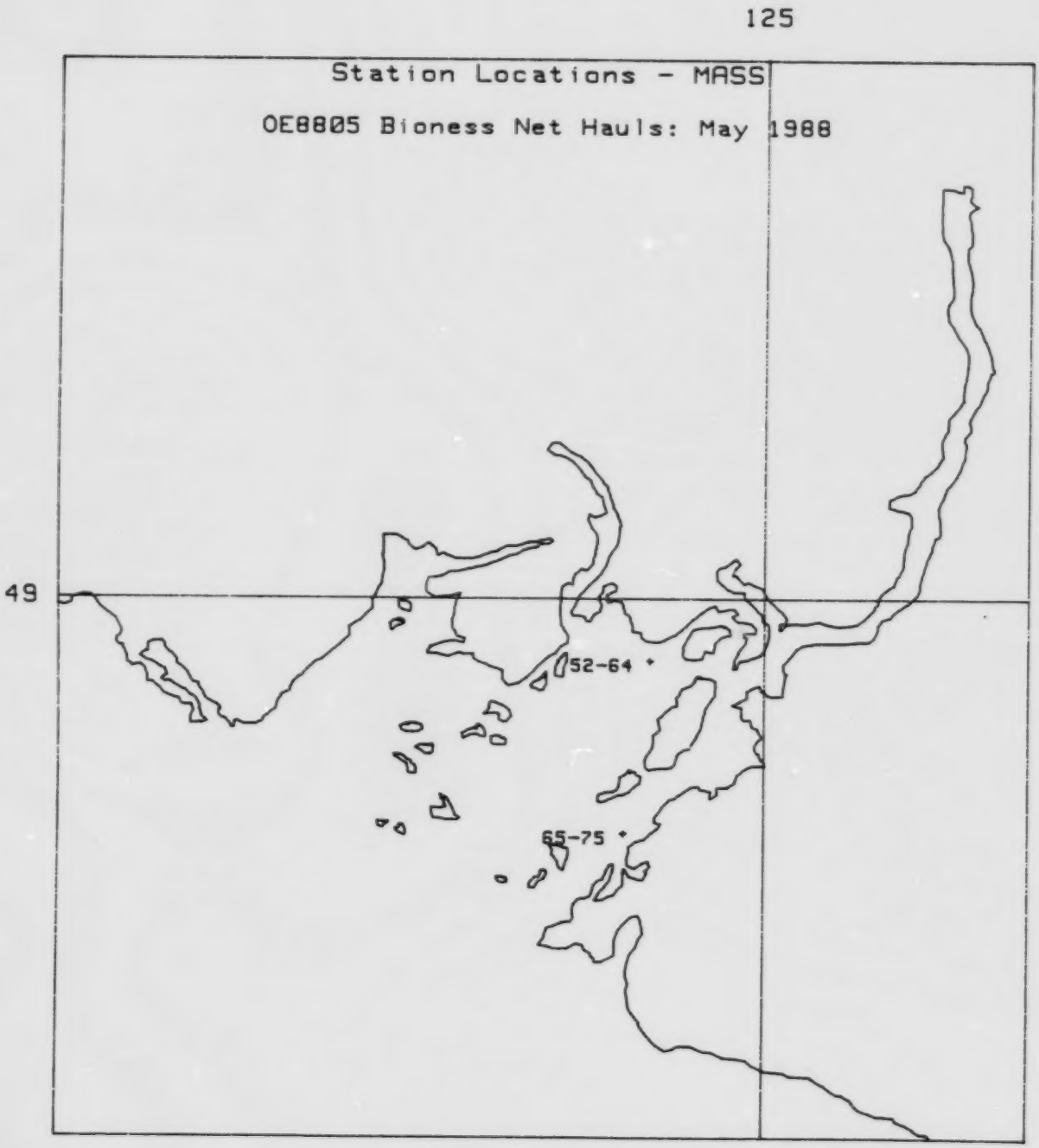
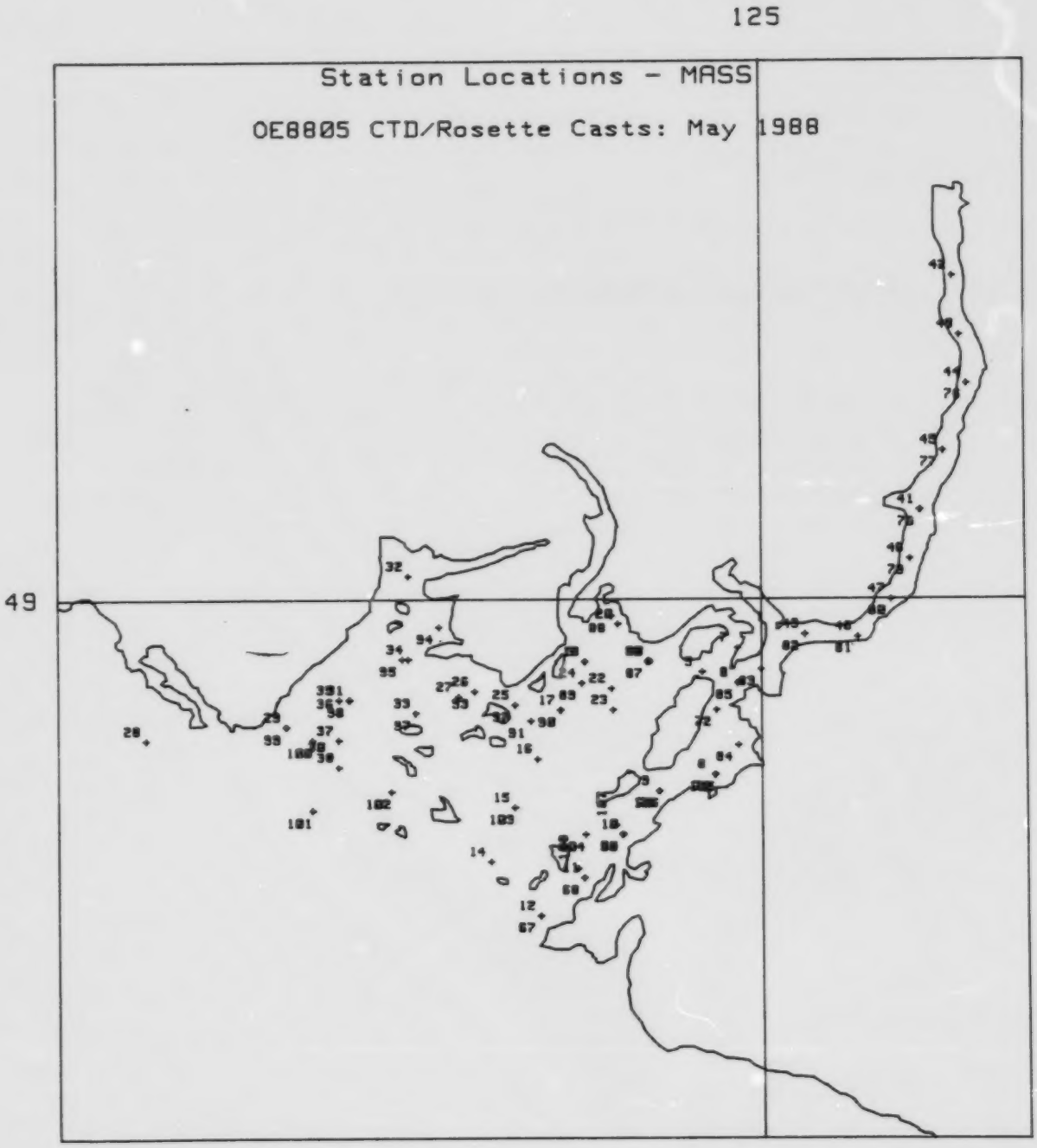


Fig. 8 OE8805 Station Locations (CTD/Rosette Casts)



DATA SECTION 2

DATA INVENTORY

Table 1 OE8805 data collected

Table 2 WV87 and OE8805 zooplankton sample inventory

[Data invent. tables: + data collected
- data not collected]

TABLE 1: CRUISE OE8805: DATA COLLECTED

Station	Date	Time	Latitude	Longitude	CTD	In situ fluor.	Beam Atten.	In situ irr.	Nut.	Chl a	POC/ PON	Bact.	Phyto.	Zoopl.
1	03 05	1515	48 57.1'	125 01.3'	-	-	-	-	-	-	-	-	-	+
2	03 05	1610	48 57.1'	125 01.3'	+	+	+	+	+	+	-	-	-	-
2B	03 05	1658	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	+	-
3	04 05	0528	48 57.9'	125 10.0'	+	+	+	+	-	-	-	-	-	-
4	04 05	0602	48 57.9'	125 06.4'	+	+	+	+	+	+	-	-	+	+
5	04 05	0637	48 57.5'	125 03.3'	+	+	+	+	-	-	-	-	-	-
6	04 05	0615	48 57.1'	125 01.3'	+	+	+	+	+	+	-	-	+	+
6B	04 05	0907	48 57.1'	125 01.3'	+	+	+	+	-	+	+	+	+	-
6C	04 05	0927	48 57.3'	125 01.3'	+	+	+	+	-	-	-	-	+	-
6D	04 05	0946	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	-	-
7	04 05	1200	48 58.4'	125 01.3'	+	+	+	+	+	+	-	-	+	+
8	04 05	1259	48 53.7'	125 02.6'	+	+	+	+	-	-	-	-	-	-
9	04 05	1334	48 53.1'	125 05.8'	+	+	+	+	-	-	-	-	-	+
10	04 05	1425	48 51.5'	125 07.9'	+	+	+	+	-	-	-	-	-	+
10A	04 05	1446	48 51.5'	125 07.9'	+	+	+	+	+	+	-	-	-	-
11	04 05	1522	48 49.9'	125 10.1'	+	+	+	+	-	-	-	-	+	-
12	04 05	1556	48 48.5'	125 12.6'	+	+	+	+	+	+	-	-	+	+
14	05 05	0913	48 50.5'	125 15.4'	+	+	+	+	+	+	-	+	+	+
15A	05 05	1031	48 52.5'	125 14.0'	+	+	+	+	+	-	+	+	+	+
15B	05 05	1052	48 52.5'	125 14.0'	+	+	+	+	-	+	-	+	-	-
16	05 05	1150	48 54.3'	125 12.7'	+	+	+	+	-	-	-	-	+	-
17	05 05	1218	48 56.1'	125 11.4'	+	+	+	+	+	+	-	+	-	+
18	05 05	1301	48 57.9'	125 10.0'	+	+	+	+	-	-	-	-	-	-
19	05 05	1325	48 56.1'	125 11.4'	-	-	-	-	-	-	-	-	-	-
20	05 05	1354	48 59.3'	125 08.1'	+	+	+	-	-	-	-	-	-	+
21	05 05	1413	48 57.9'	125 06.4'	+	+	+	+	+	+	-	+	+	-
22	05 05	1454	48 56.9'	125 08.5'	+	+	+	+	-	+	-	-	-	-
23	05 05	1507	48 56.1'	125 08.4'	+	+	+	+	+	+	-	-	-	+

Station	Date	Time	Latitude	Longitude	CTD	In situ fluor.	Beam Atten.	In situ irr.	Nut.	Chl a	POC/ PON	Bact.	Phyto.	Zoopl.
24	05 05	1541	48 57.1'	125 10.2'	+	+	+	+	–	–	–	–	–	–
25	05 05	1606	48 56.3'	125 14.0'	+	+	+	+	+	+	–	–	+	+
26	05 05	1636	48 56.8'	125 16.3'	+	+	+	+	–	–	–	–	–	–
27	05 05	1703	48 56.6'	125 17.2'	+	+	+	+	+	+	–	–	+	+
28	06 05	0826	48 55.0'	125 35.0'	+	+	+	+	+	–	–	+	+	+
29	06 05	0941	48 55.5'	125 27.0'	+	+	+	+	–	–	–	–	–	–
30	06 05	0953	48 54.4'	125 24.5'	+	+	+	+	–	–	–	–	–	–
31A	06 05	1015	48 56.5'	125 23.4'	+	+	+	+	+	–	+	+	+	+
31B	06 05	1047	48 56.5'	125 23.4'	+	+	+	+	–	+	–	–	–	–
32	06 05	1156	49 01.0'	125 20.0'	+	+	+	+	–	–	–	–	–	+
33	06 05	1240	48 56.0'	125 19.6'	+	+	+	+	–	–	–	–	–	–
34	06 05	1313	48 58.0'	125 20.4'	+	+	+	+	+	+	+	+	+	+
35	06 05	1351	48 56.5'	125 24.0'	+	+	+	+	–	–	–	–	–	–
36	06 05	1419	48 56.0'	125 24.0'	+	+	+	+	–	–	–	–	–	–
37	06 05	1429	48 55.0'	125 24.0'	+	+	+	+	–	–	–	–	–	–
38	06 05	1443	48 54.0'	125 24.0'	+	+	+	+	–	–	–	–	–	–
41A	07 05	0845	49 03.5'	124 50.9'	+	+	+	+	+	–	+	–	+	+
41B	07 05	0928	49 03.5'	124 50.9'	+	+	+	+	–	+	–	–	–	–
42A	07 05	2027	49 12.2'	124 49.0'	+	+	+	+	+	+	–	–	–	+
43	07 05	2059	49 10.0'	124 48.6'	+	+	+	+	–	–	–	–	–	–
44	07 05	2129	49 08.2'	124 48.2'	+	+	+	+	+	+	–	–	–	+
45	07 05	2219	49 05.7'	124 49.6'	+	+	+	+	–	–	–	–	–	–
46	07 05	2248	49 01.7'	124 51.5'	+	+	+	+	+	+	–	–	–	+
47	07 05	2348	49 00.2'	124 52.6'	+	+	+	+	–	–	–	–	–	–
48	08 05	0021	48 58.8'	124 54.5'	+	+	+	+	+	+	–	–	–	–
49	08 05	0103	48 58.9'	124 57.5'	+	+	+	+	+	+	–	–	–	+
50	08 05	0819	48 57.9'	125 06.4'	+	+	+	+	+	–	+	+	+	–
50A	08 05	0847	48 57.9'	125 06.4'	+	+	+	+	–	+	–	–	–	–
51	08 05	1137	48 57.9'	125 06.4'	+	+	+	+	+	+	+	–	–	–
52	08 05	1308	48 57.9'	125 06.4'	+	–	–	–	–	–	–	–	–	+
53	08 05	1504	48 57.9'	125 06.4'	+	+	+	+	+	+	+	–	–	–

Station	Date	Time	Latitude	Longitude	CTD	In situ fluor.	Beam Atten.	In situ irr.	Nut.	Chl a	POC/ PON	Bact.	Phyto.	Zoopl.
54	08 05	1639	48 57.9'	125 06.4'	+	–	–	–	–	–	–	–	–	+
55	08 05	1842	48 57.9'	125 06.4'	–	–	–	–	–	+	+	–	–	–
56	08 05	2051	48 57.9'	125 06.4'	+	+	+	+	+	–	+	–	–	–
57	08 05	2154	48 57.9'	125 06.4'	+	–	–	–	–	–	–	–	–	+
58	08 05	2354	48 57.9'	125 06.4'	+	+	+	+	+	+	+	–	–	–
59	09 05	0115	48 57.9'	125 06.4'	+	–	–	–	–	–	–	–	–	+
60	09 05	0252	48 57.9'	125 06.4'	+	+	+	+	+	+	+	–	–	–
61	09 05	0438	48 57.9'	125 06.4'	+	–	–	–	–	–	–	–	–	+
62A	09 05	0600	48 57.9'	125 06.4'	+	+	+	+	+	+	+	–	–	–
63	09 05	0851	48 57.9'	125 06.4'	+	+	+	+	+	+	+	+	+	–
64	09 05	1000	48 57.9'	125 06.4'	+	–	–	–	–	–	–	–	–	+
65	09 05	1315	48 51.5'	125 07.9'	+	–	–	–	–	–	–	–	–	+
66	09 05	1341	48 51.5'	125 07.9'	+	+	+	+	+	–	+	+	+	–
66A	09 05	1412	48 51.5'	125 07.9'	+	+	+	+	–	+	–	–	–	–
66B	09 05	1433	48 51.5'	125 07.9'	+	+	+	+	–	–	–	–	–	–
67	09 05	1523	48 48.5'	125 12.6'	+	+	+	+	+	–	–	–	–	–
68	09 05	1559	48 49.9'	125 10.1'	+	+	+	+	+	–	–	–	–	–
69	09 05	1659	48 51.5'	125 07.9'	+	+	+	+	–	–	–	–	–	–
70	09 05	1752	48 53.1'	125 05.8'	+	+	+	+	+	–	–	–	–	–
71	09 05	1837	48 53.7'	125 02.6'	+	+	+	+	+	–	–	–	–	–
72	09 05	1923	48 56.1'	125 02.5'	+	+	+	+	+	–	–	–	–	–
73	09 05	1946	48 53.7'	125 02.6'	+	+	+	+	+	–	–	–	–	–
74	09 05	2253	48 51.5'	125 07.9'	+	+	+	+	+	+	+	–	–	–
75	09 05	2339	48 51.5'	125 07.9'	+	–	–	–	–	–	–	–	–	+
76	10 05	0819	49 08.2'	124 48.2'	+	+	+	+	+	–	+	+	–	+
76A	10 05	0841	49 08.2'	124 48.2'	+	+	+	+	–	+	–	–	–	–
76B	10 05	0912	49 08.2'	124 48.2'	+	+	+	+	–	–	–	–	–	–
76C	10 05	0944	49 08.2'	124 48.8'	+	+	+	+	–	–	–	–	–	–
77	10 05	1015	49 05.7'	124 49.6'	+	+	+	+	–	–	–	–	–	–
78	10 05	1044	49 03.5'	124 50.9'	+	+	+	+	+	+	–	–	–	+
79	10 05	1131	49 01.7'	124 51.5'	+	+	+	+	–	–	–	–	–	–

Station	Date	Time	Latitude	Longitude	CTD	In situ fluor.	Beam Atten.	In situ irr.	Nut.	Chl a	POC/ PON	Bact.	Phyto.	Zoopl.
80	10 05	1203	49 00.2'	124 52.6'	+	+	+	+	+	+	-	-	-	+
81	10 05	1315	48 58.8'	124 54.5'	+	+	+	+	-	-	-	-	-	-
82	10 05	1357	48 58.9'	124 57.5'	+	+	+	+	+	+	-	-	-	+
83	10 05	1425	48 57.6'	125 00.0'	+	+	+	+	-	-	-	-	-	-
84	10 05	1536	48 54.8'	125 01.3'	+	+	+	+	-	-	-	-	-	+
85	10 05	1645	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	-	-
85A	10 05	1645	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	-	-
85B	10 05	1750	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	-	-
85C	10 05	1823	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	-	-
85D	10 05	1856	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	-	-
85E	10 05	1925	48 57.1'	125 01.3'	+	+	+	+	-	-	-	-	-	-
85F	10 05	1954	48 57.1'	125 01.3'	+	+	+	+	+	+	-	-	-	-
87	11 05	0655	48 57.9'	125 06.4'	+	+	+	+	-	-	-	-	-	-
88A	11 05	0805	48 59.6'	125 08.5'	+	+	+	+	+	+	-	-	-	+
89	11 05	0854	48 57.1'	125 10.2'	+	+	+	+	-	-	-	-	-	-
90	11 05	0909	48 56.1'	125 11.4'	+	+	+	+	-	-	-	-	-	-
91	11 05	0941	48 55.7'	125 13.1'	+	+	+	+	-	-	-	-	-	-
92	11 05	0956	48 56.3'	125 14.0'	+	+	+	+	+	+	-	-	-	+
93	11 05	1038	48 56.8'	125 16.3'	+	+	+	+	-	-	-	-	-	-
94	11 05	1119	48 59.2'	125 18.3'	+	+	+	+	-	-	-	-	-	+
95	11 05	1207	48 58.0'	125 20.4'	+	+	+	+	+	-	-	+	+	+
95A	11 05	1229	48 58.0'	125 20.4'	+	+	+	+	-	+	-	-	-	-
95B	11 05	1253	48 58.0'	125 20.4'	+	+	+	+	-	-	-	-	-	-
96A	11 05	1356	49 01.0'	125 20.0'	+	+	+	+	-	-	-	-	-	-
97	11 05	1406	48 56.0'	125 19.6'	+	+	+	+	-	-	-	-	-	-
98	11 05	1448	48 56.5'	125 23.4'	+	+	+	+	+	+	-	-	+	-
99	11 05	1525	48 55.5'	125 27.0'	+	+	+	+	-	-	-	-	-	-
100	12 05	0704	48 55.0'	125 25.5'	+	+	+	+	+	+	+	+	+	+
101	12 05	0953	48 52.4'	125 25.5'	+	+	+	+	-	-	-	-	-	-
102	12 05	1058	48 53.1'	125 21.0'	+	+	+	+	-	-	-	-	-	-
103	12 05	1208	48 52.5'	125 14.0'	+	+	+	+	+	+	+	+	+	-

Station	Date	Time	Latitude	Longitude	CTD	In situ fluor.	Beam Atten.	In situ irr.	Nut.	Chl a	POC/ PON	Bact.	Phyto.	Zoopl.
104	12 05	1319	48 51.5'	125 10.0'	+	+	+	+	-	-	-	-	-	-
105	12 05	1356	48 53.7'	125 02.6'	+	+	+	+	-	-	-	-	-	+
106	12 05	1423	48 53.1'	125 05.8'	+	+	+	+	-	-	-	-	-	-
107	12 05	1501	48 51.5'	125 07.9'	+	+	+	+	+	-	+	-	-	+
108	12 05	1538	48 49.9'	125 10.1'	+	+	+	+	-	-	-	-	-	+

TABLE 2: WV87 AND OE8805 ZOOPLANKTON SAMPLE INVENTORY

Bongo Net Samples

WV87

Station	Date	Latitude	Longitude	Water depth	Net haul depth	Analysis types
1	27 Apr 87	49 08	124 48	125	120	sfb
2	26 Apr 87	49 04	124 51	263	258	sfb
3	29 Apr 87	48 57	125 02	260	255	sfb
4	30 Apr 87	48 52	125 08	128	123	sfb
5	26 Apr 87	48 58	125 07	96	91	sfb
6	25 Apr 87	48 53	125 14	96	91	sfb id/abun
7	22 Apr 87	48 58	125 20	44	39	sfb id/abun
8	24 Apr 87	48 57	125 24	52	46	sfb id/abun
9	23 Apr 87	48 55	125 35	97	93	sfb id/abun

OE8805

Station	Date	Latitude	Longitude	Water depth	Net haul depth	Analysis types
1	3 May 88	48 57.1	125 01.3	246	240	sfb
4	4 May 88	48 57.9	125 06.4	95	90	sfb
6	4 May 88	48 57.1	125 01.3	250	240	sfb
7	4 May 88	48 58.4	125 01.3	40	40	sfb
9	4 May 88	48 53.1	125 05.8	148	140	sfb
10	4 May 88	48 51.5	125 07.9	130	120	sfb

OE8805 (cont.)

Station	Date	Latitude	Longitude	Water depth	Net haul depth	Analysis types
12	4 May 88	48 48.5	125 12.6	34	25	sfb
14	5 May 88	48 50.5	125 15.4	102	98	sfb
16	5 May 88	48 52.5	125 14.0	94	92	sfb id/abun
17	5 May 88	48 56.1	125 11.4	96	95	sfb
20	5 May 88	48 59.3	125 08.1	84	80	sfb
23	5 May 88	48 56.1	125 08.4	90	85	sfb
25	5 May 88	48 56.3	125 14.0	75	75	sfb
27	5 May 88	48 56.6	125 17.2	70	70	sfb
28	6 May 88	48 55.0	125 35.0	92	90	sfb id/abun
31	6 May 88	48 56.5	125 23.4	47	45	sfb id/abun
32	6 May 88	49 01.0	125 20.0	27	25	sfb
34	6 May 88	48 58.0	125 20.4	38	35	sfb id/abun
41	7 May 88	49 03.5	124 50.9	262	250	sfb
42	7 May 88	49 12.2	124 49.0	62	54	sfb
44	7 May 88	49 08.2	124 48.2	122	118	sfb
46	7 May 88	49 01.7	124 51.5	297	250	sfb
49	8 May 88	48 58.9	124 57.5	172	165	sfb
76	10 May 88	49 08.2	124 48.2	122	10	sfb
78	10 May 88	49 03.5	124 50.9	256	10	sfb
80	10 May 88	49 00.2	124 52.6	309	10	sfb
82	10 May 88	48 58.9	124 57.5	172	10	sfb
84	10 May 88	48 54.8	125 01.3	113	10	sfb
88	11 May 88	48 59.6	125 08.5	84	10	sfb
92	11 May 88	48 56.3	125 14.0	65	10	sfb
94	11 May 88	48 59.2	125 18.3	37	10	sfb
95	11 May 88	48 58.0	125 20.4	38	35	sfb
100	12 May 88	48 55.0	125 25.5	115	115	sfb
105	12 May 88	48 53.7	125 02.6	140	10	sfb
107	12 May 88	48 51.5	125 07.9	142	115	sfb
108	12 May 88	48 49.9	125 10.1	68	10	sfb

Bioness Samples

OE8805

Station	Samples	Date	Start Lat.	Start Long.	Start (PDT)	Max. depth	
52	6	8 May 88	48 57.9	125 6.4	1308	92	id/abun
54	6	8 May 88	48 57.9	125 6.4	1639	90	id/abun
57	5	8 May 88	48 57.9	125 6.4	2154	91	id/abun
59	5	9 May 88	48 57.9	125 6.4	0115	85	id/abun
61	5	9 May 88	48 57.9	125 6.4	0438	90	id/abun
64	5	9 May 88	48 57.9	125 6.4	1000	90	id/abun
65	5	9 May 88	48 51.5	125 7.9	1315	121	id/abun
75	6	9 May 88	48 51.5	125 7.9	2339	121	id/abun

Analysis types

sfb size–fractioned biomass

id/abun identity and abundance of animals

DATA SECTION 3

ZOOPLANKTON SIZE DISTRIBUTION; SURFACE ZOOPLANKTON BIOMASS, SALINITY AND TEMPERATURE

Fig. 9 WV87 Zooplankton biomass (size-fractioned)
(Vertical net haul data)

Fig. 10 OE8805 Zooplankton biomass (size-fractioned)
(Vertical net haul data, note duplicate samples at some sites)

Fig. 11 OE8805 Zooplankton biomass (size-fractioned)
(Oblique, 0-10m, net haul data)

Fig. 12 OE8805 EPCS zooplankton biomass 3 - 4 May 1988

Fig. 13 OE8805 EPCS zooplankton biomass 6 - 7 May 1988

Fig. 14 OE8805 EPCS zooplankton biomass 11 - 12 May 1988

Fig. 15 OE8805 EPCS surface salinity 3 - 4 May 1988
(contour interval is 2psu)

Fig. 16 OE8805 EPCS surface salinity 6 - 7 May 1988
(contour interval is 2psu)

Fig. 17 OE8805 EPCS surface salinity 11 - 12 May 1988
(contour interval is 2psu)

Fig. 18 OE8805 EPCS surface temperature 3 - 4 May 1988

Fig. 19 OE8805 EPCS surface temperature 6 - 7 May 1988

Fig. 20 OE8805 EPCS surface temperature 11 - 12 May 1988

Fig. 9 WV87 Zooplankton biomass (size-fractioned)
(Vertical net haul data)

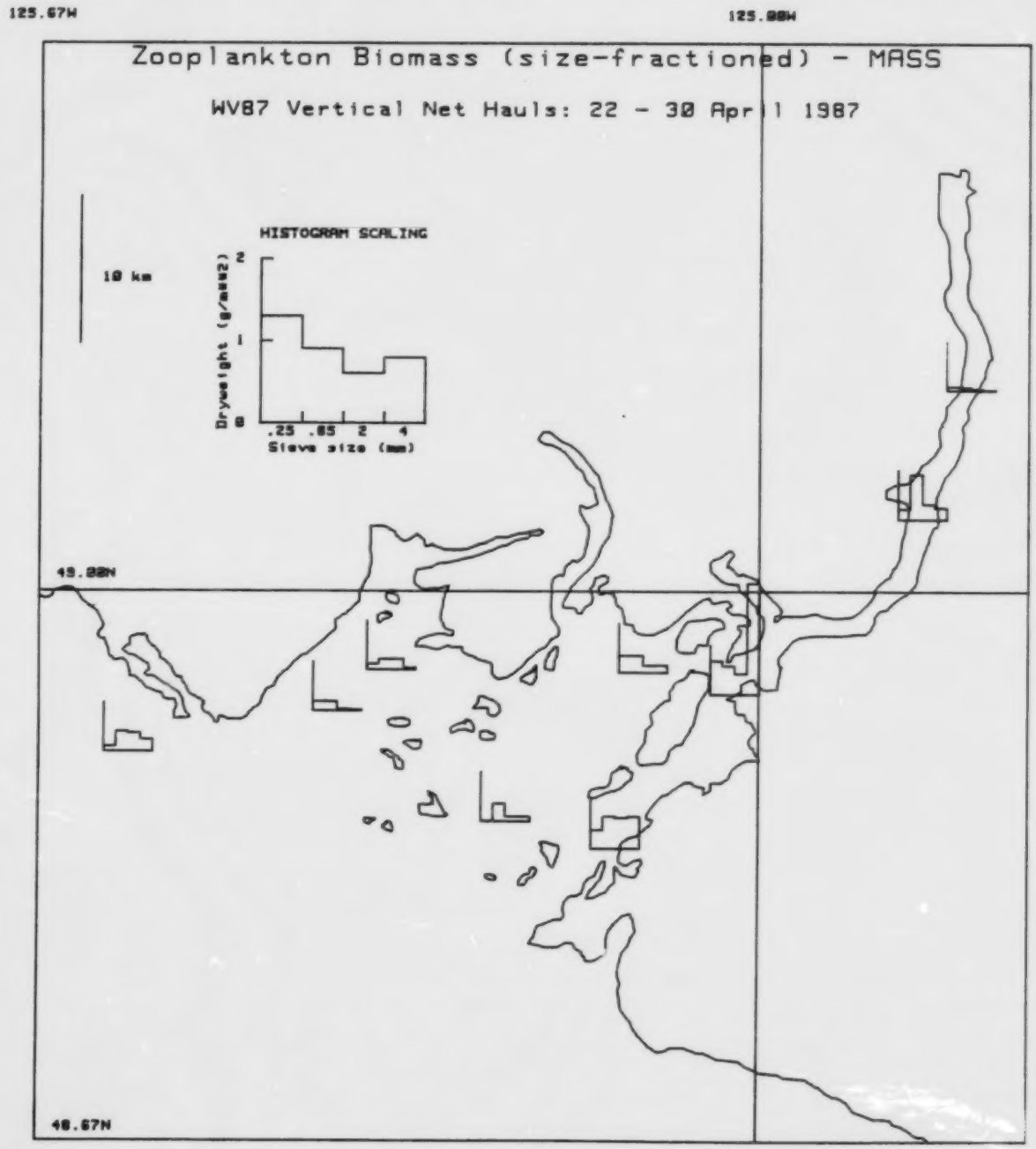


Fig. 10 OE8805 Zooplankton biomass (size-fractioned)
(Vertical net haul data)

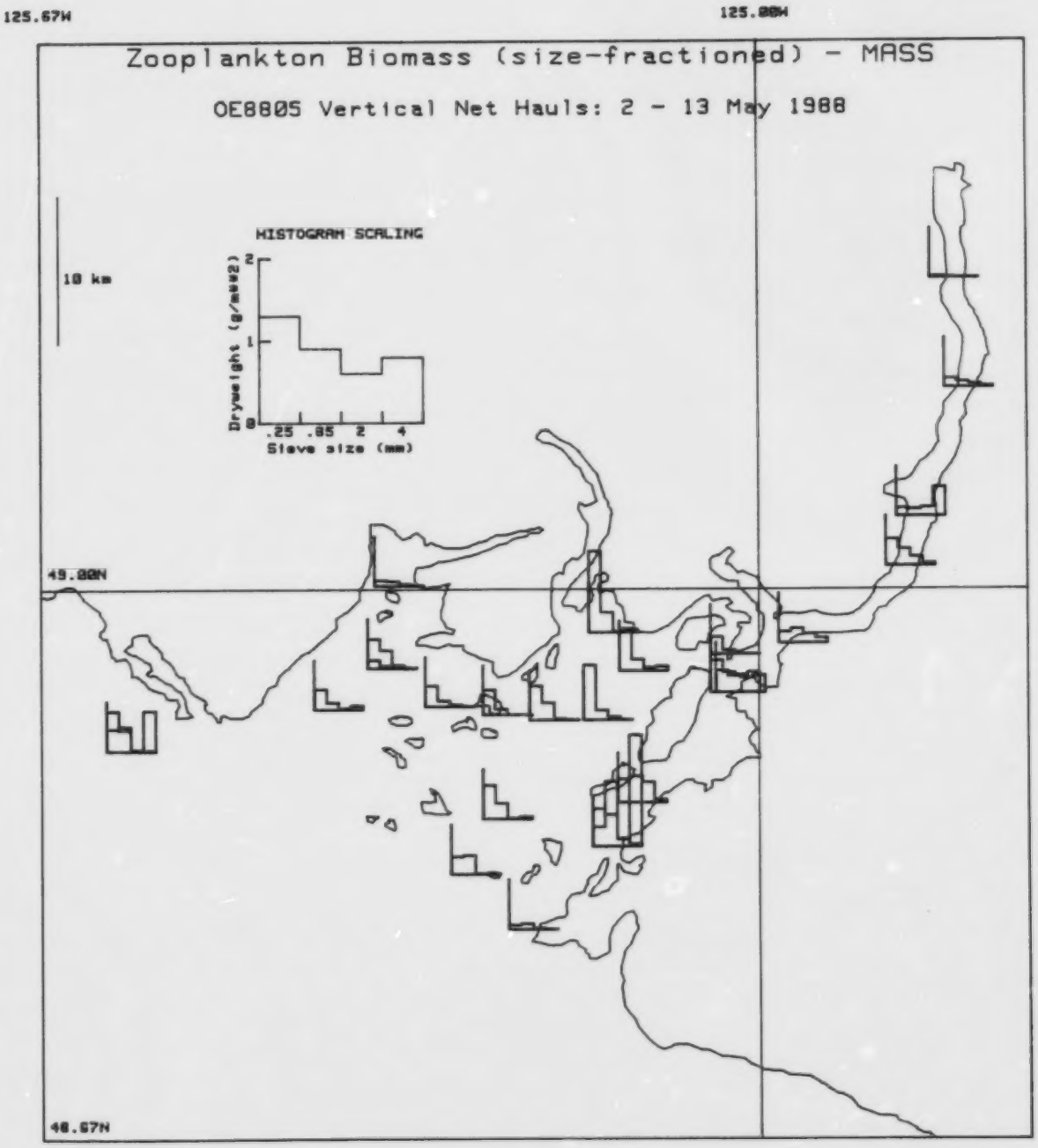


Fig. 11 OE8805 Zooplankton biomass (size-fractioned)
(Oblique, 0-10m, net haul data)

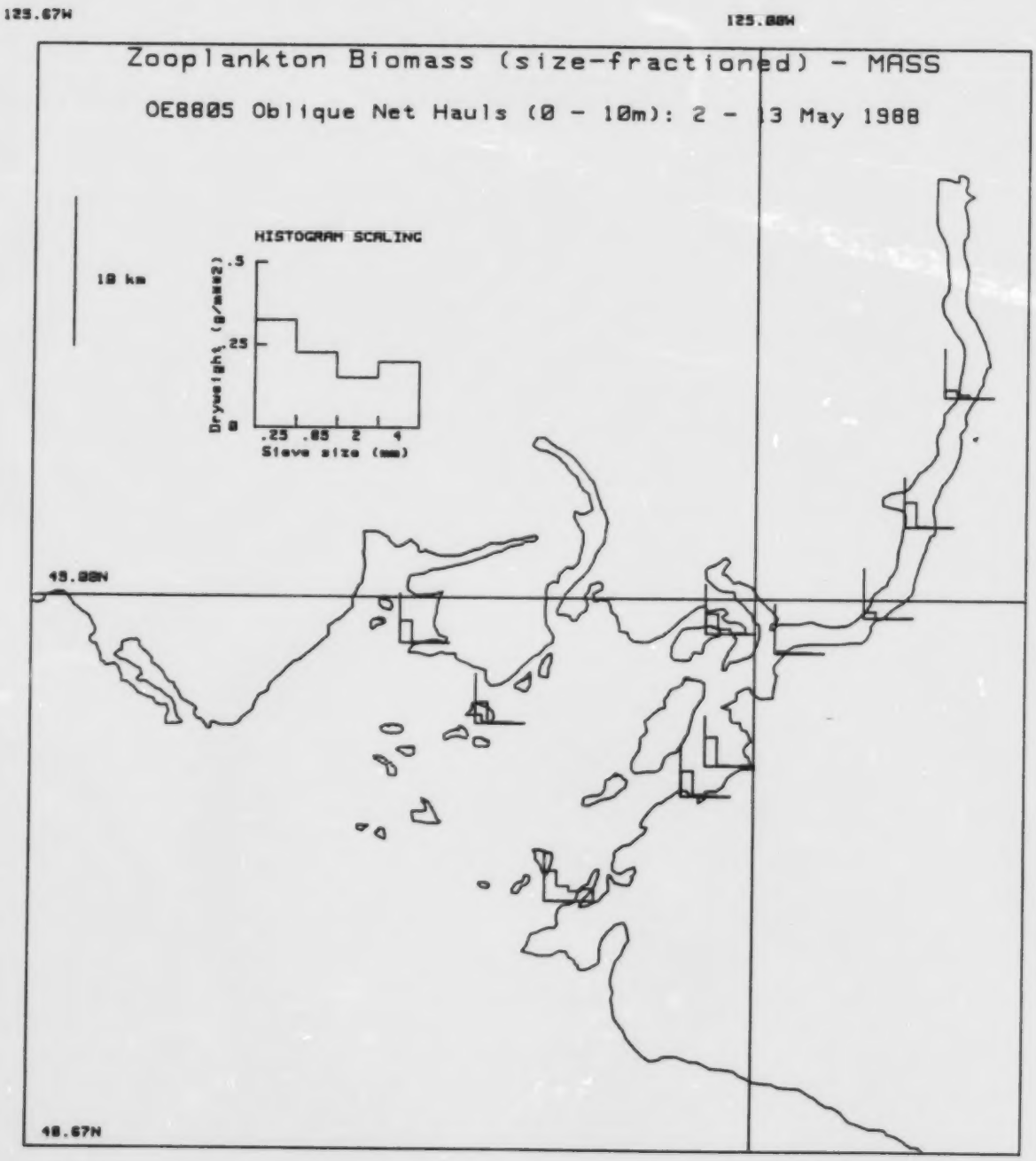


Fig. 12 OE8805 EPCS zooplankton biomass 3 - 4 May 1988

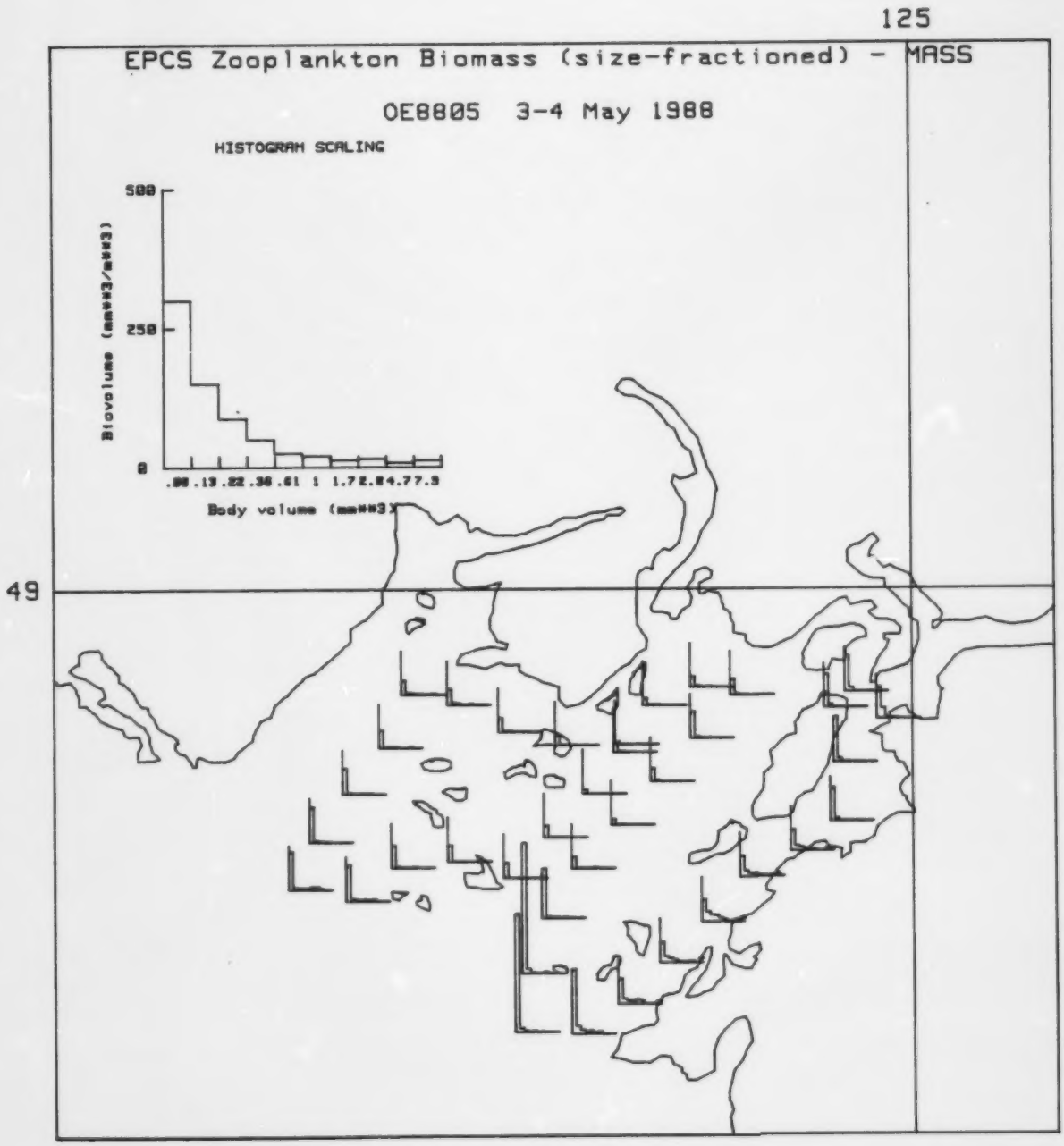


Fig. 13 OE8805 EPCS zooplankton biomass 6 - 7 May 1988

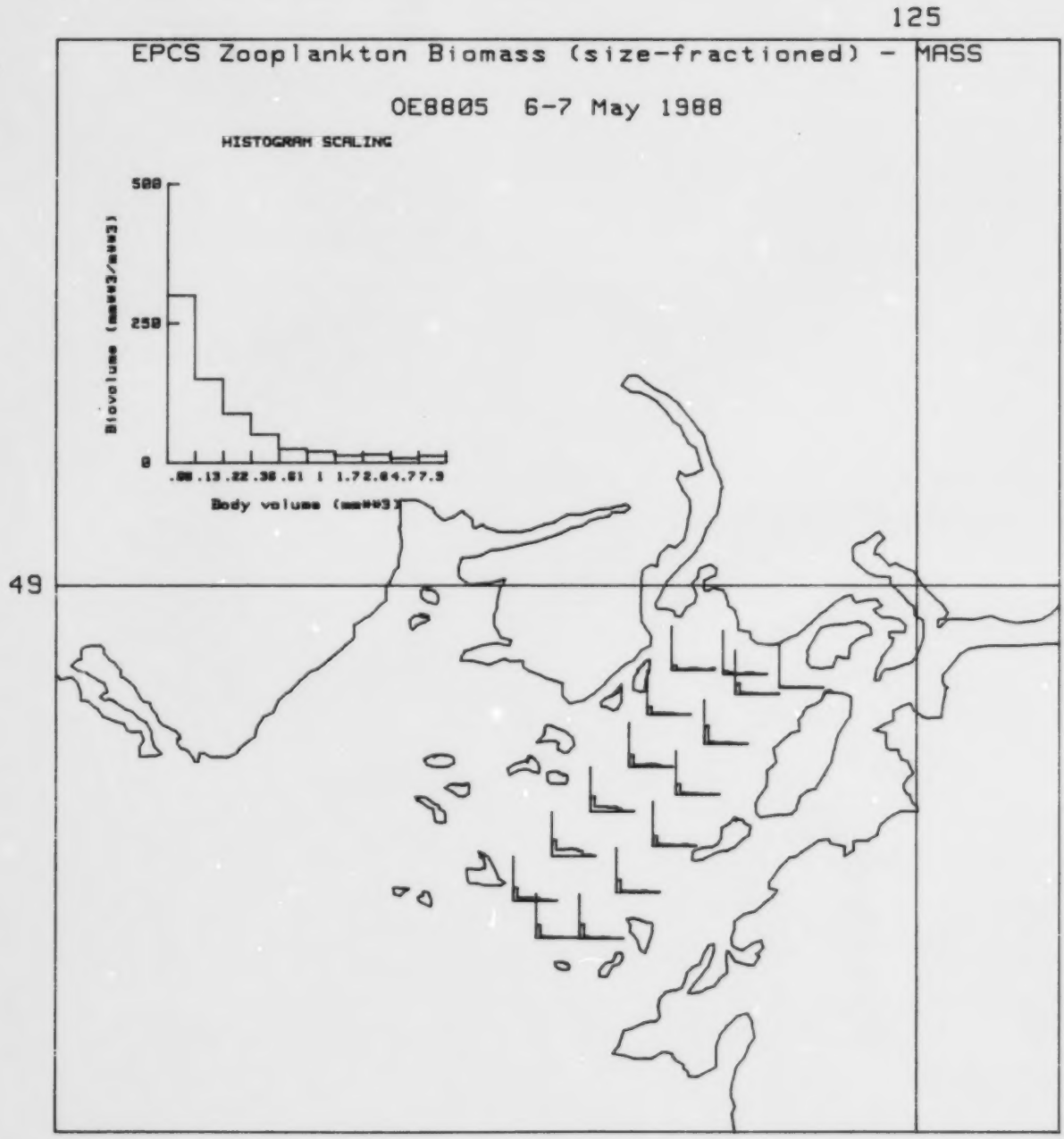


Fig. 14 OE8805 EPCS zooplankton biomass 11 - 12 May 1988

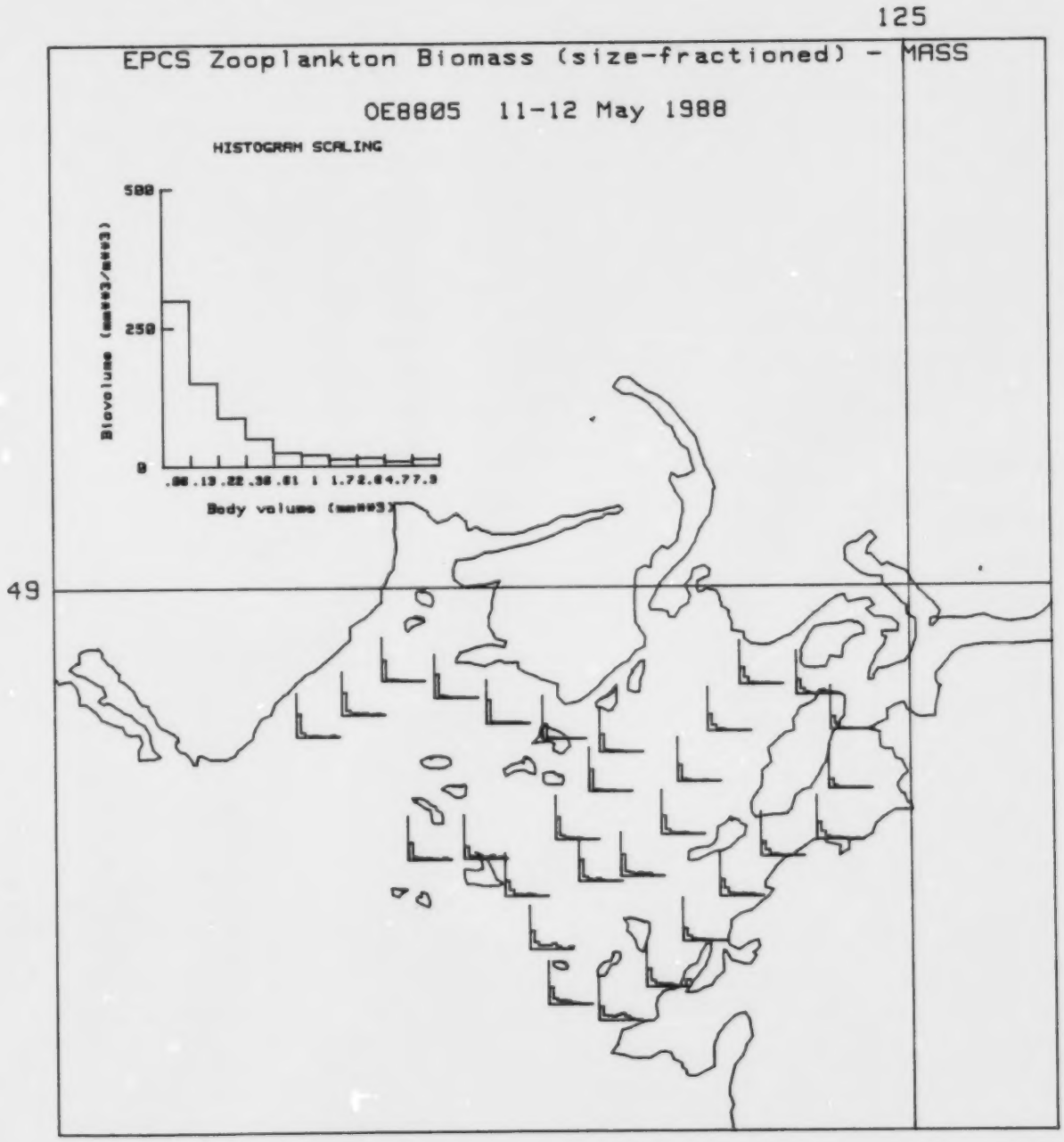


Fig. 15 OE8805 EPCS surface salinity 3 - 4 May 1988

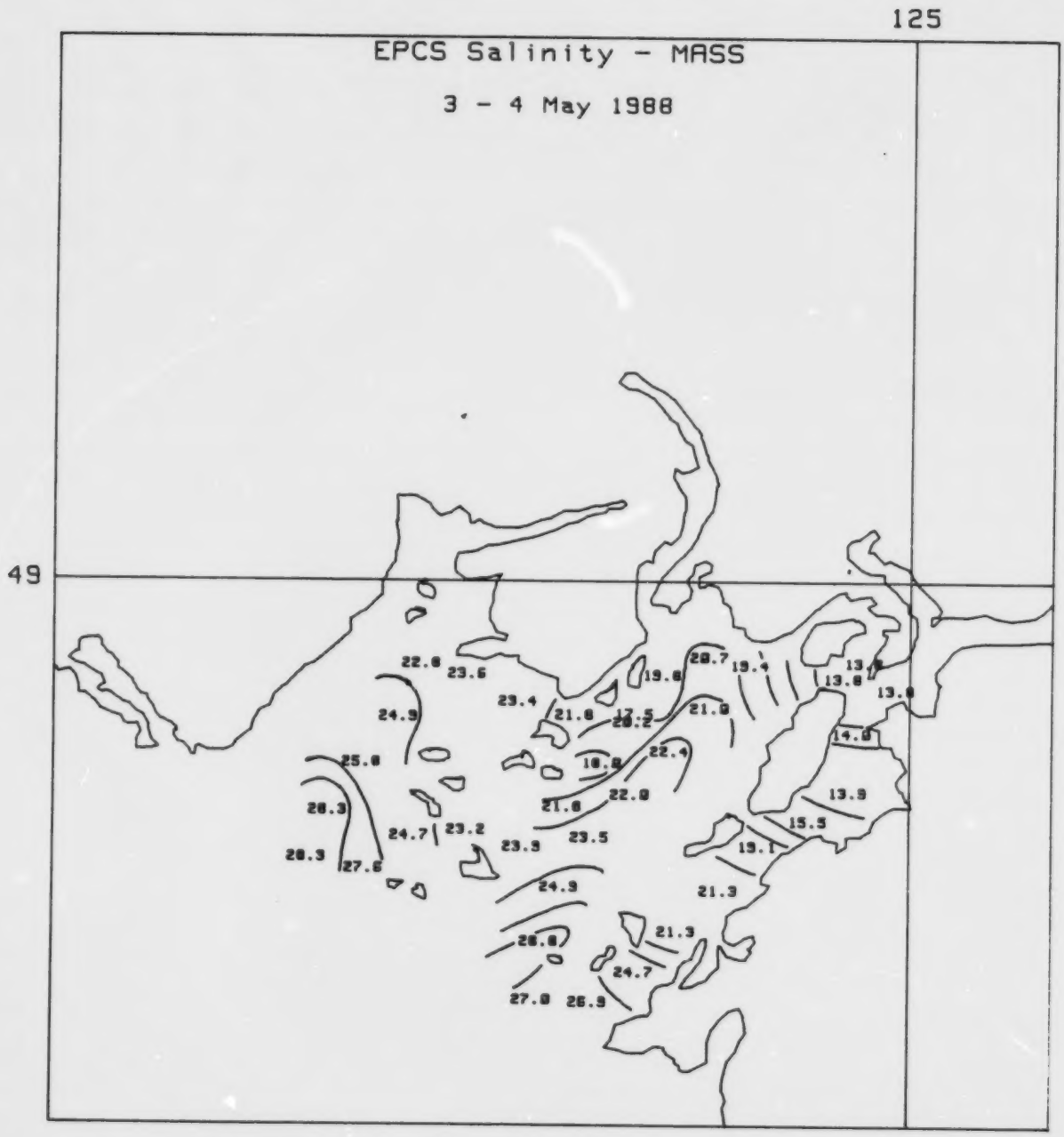


Fig. 16 OE8805 EPCS surface salinity 6 - 7 May 1988

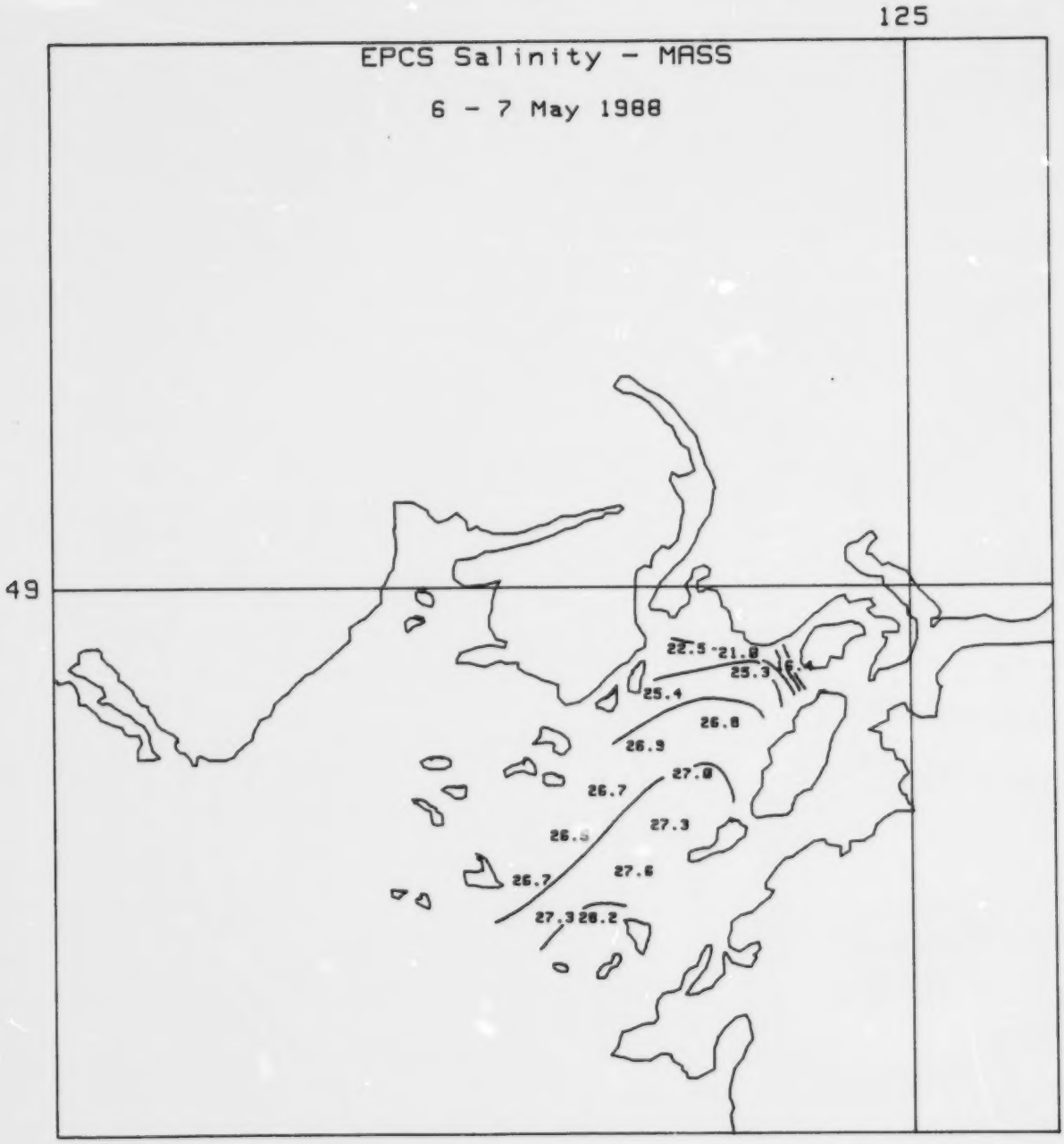


Fig. 17 OE8805 EPCS surface salinity 11 - 12 May 1988

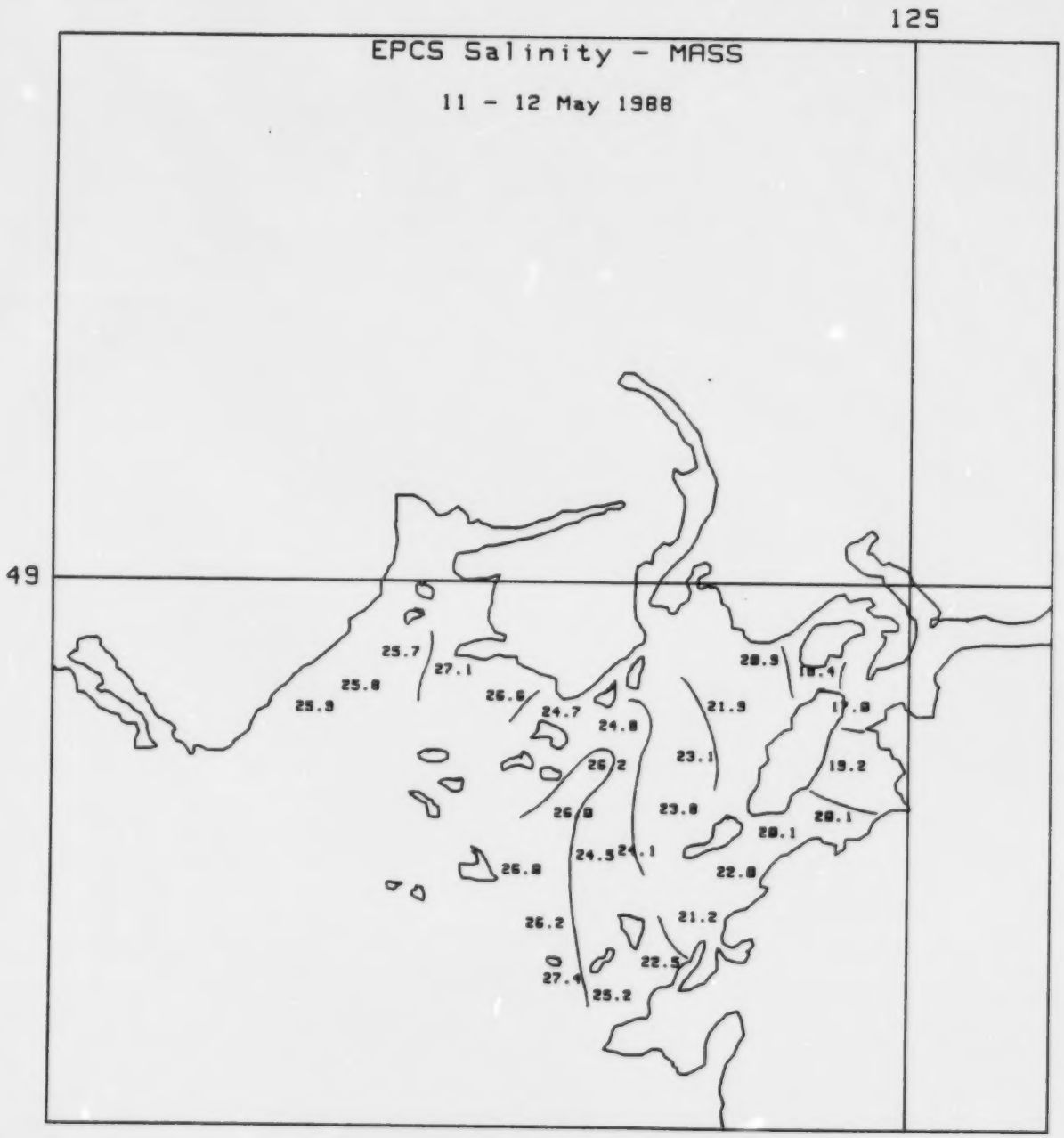


Fig. 18 OE8805 EPCS surface temperature 3 - 4 May 1988

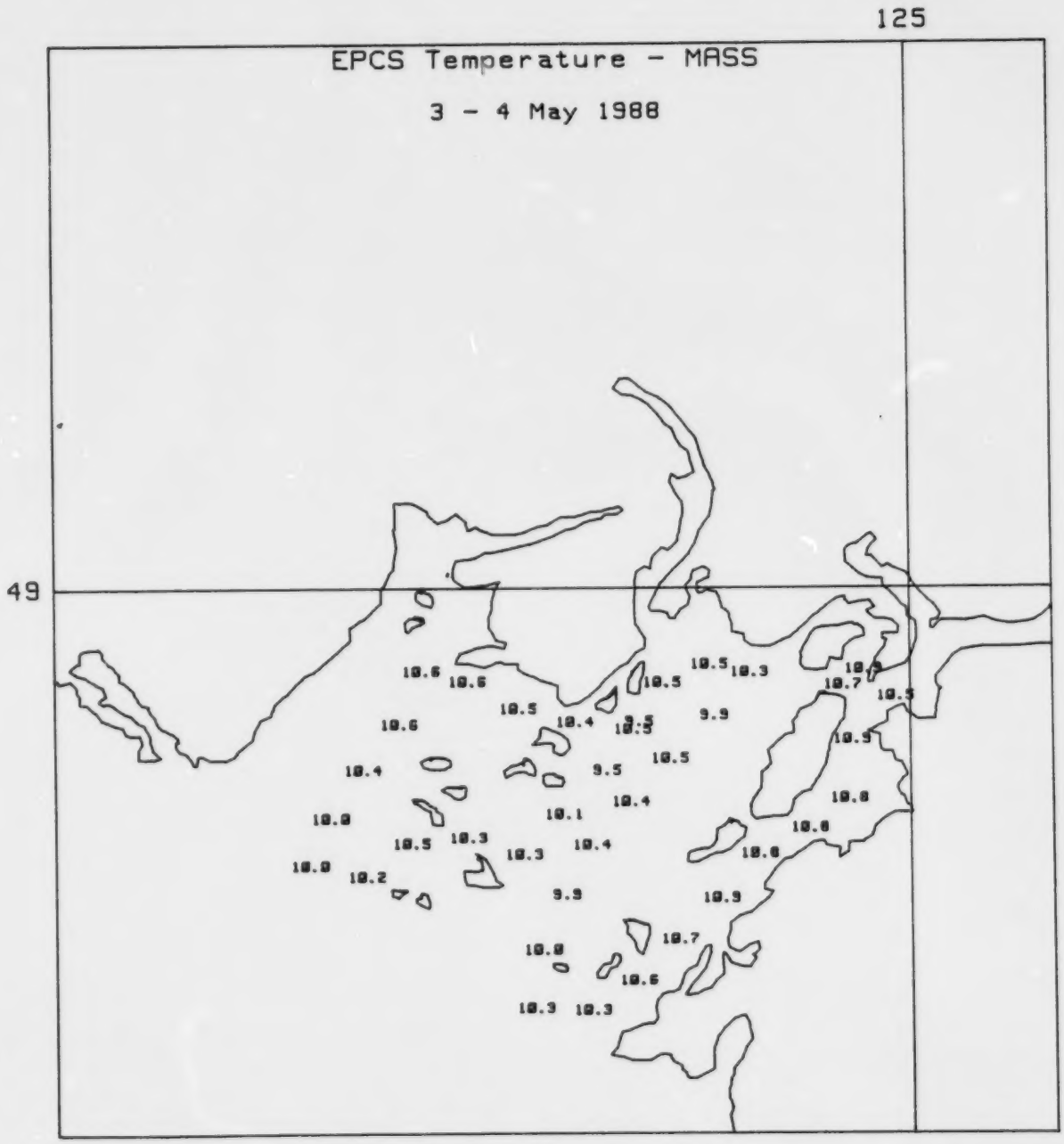


Fig. 19 OE8805 EPCS surface temperature 6 - 7 May 1988

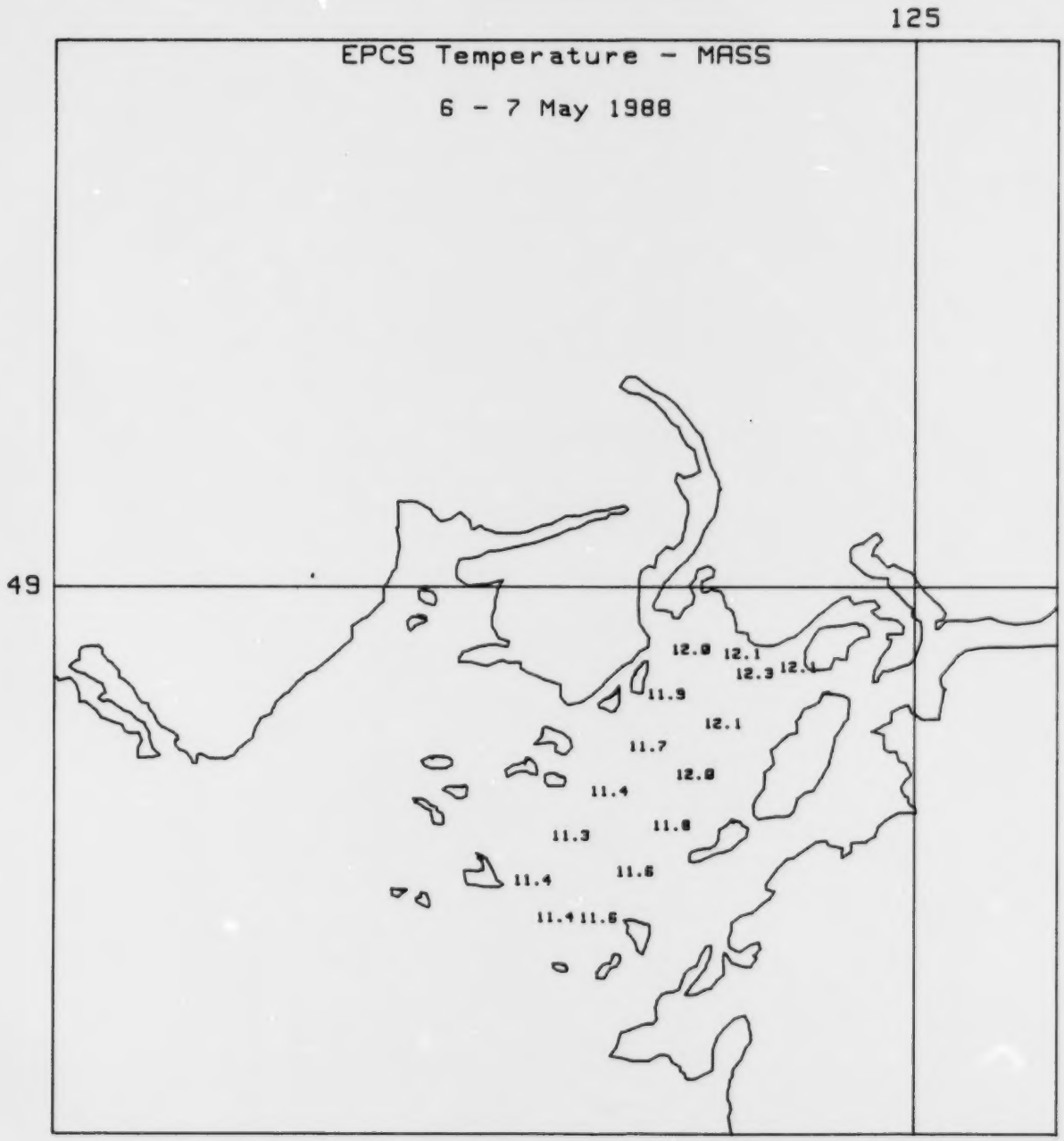
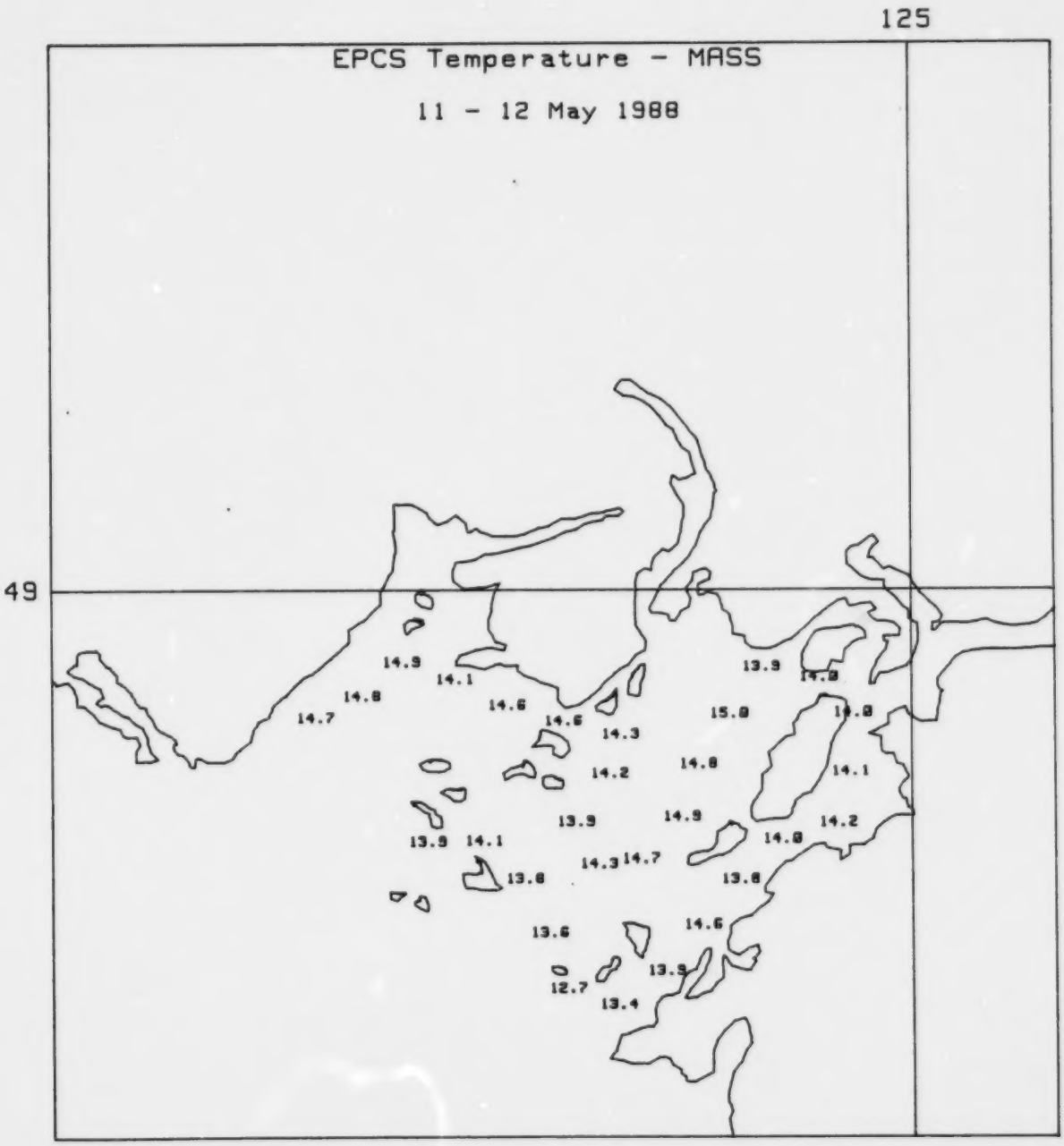


Fig. 20 OE8805 EPCS surface temperature 11 - 12 May 1988



DATA SECTION 4

DISCRETE WATER SAMPLE DATA AND CTD SECTIONS

Table 3 OE8805 Discrete water sample data

Fig. 21 OE8805 CTD salinity section (stn 12 - 7)
(Trevor Channel)

Fig. 22 OE8805 CTD temperature section (stn 12 - 7)
(Trevor Channel)

Fig. 23 OE8805 CTD % transmission section (stn 12 - 7)
(Trevor Channel)

Fig. 24 OE8805 CTD salinity section (stn 84 - 76)
(Alberni Inlet)

Fig. 25 OE8805 CTD temperature section (stn 84 - 76)
(Alberni Inlet)

Fig. 26 OE8805 CTD % transmission section (stn 84 - 76)
(Alberni Inlet)

TABLE 3: DISCRETE WATER SAMPLE DATA: CRUISE OE8805

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
2	1	223.9	7.84	32.65				26.8		0.15	2.41		43.1	
2	2	201.5	7.84	32.64					26.4			2.18		43.2
2	3	151.6	7.88	32.59				34.0			2.28		43.3	
2	4	100.8	8.01	32.54				26.1	26.1	0.08	2.40	2.27	43.8	43.7
2	5	49.7	8.50	32.24				21.2	22.6	0.32	2.10	2.08	39.3	38.0
2	6	35.4	8.70	32.05	1.7			18.7			1.92		34.7	
2	7	9.9	9.18	31.40	7.9			10.1	10.8	1.18	1.15	1.07	21.0	18.9
2	8	1.9	10.52	25.38	6.8			0.2			0.38		13.5	
2B	1	34.7	8.73	32.04										
2B	2	34.7	8.74	32.04										
2B	3	34.7	8.74	32.04										
2B	4	10.2	9.21	31.41										
2B	5	10.2	9.21	31.41										
2B	6	1.5	10.35	23.22										
2B	7	1.8	10.35	24.05										
2B	8	1.6	10.27	24.70										
4	1	76.6	8.15	32.43				24.9			2.31		42.7	
4	3	51.5	9.16	31.62				9.8			1.16		16.9	
4	4	31.1	9.52	31.34				6.9			0.91		13.3	
4	5	20.5	9.73	31.28				3.5			0.69		9.1	
4	6	10.2	9.61	30.84	8.7			4.5			0.70		9.8	
4	7	1.3	9.84	29.51	6.0			1.6			0.59		8.7	
6	1	227.9	7.84	32.63				25.2	27.2	0.00	2.63	2.25	41.9	46.9
6	3	150.0	7.88	32.59				26.2	26.7	0.05	2.19	2.20	41.1	40.5
6	4	100.4	8.10	32.51				25.4	26.4	0.02	2.28	2.28	43.2	44.4
6	5	43.5	8.81	31.93	3.1			17.7	19.5	0.20	1.78	1.86	32.4	32.9
6	6	19.1	9.13	31.50	6.3			10.8	11.9	1.26	1.15	1.20	20.3	18.3
6	7	1.5	10.18	23.60				1.0	0.9	0.04	0.29	0.18	24.5	24.0

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
6B	1	45.8	8.78	32.11	1.8	94.9	14.8							
6B	2	21.0	9.11	31.64	5.2									
6B	3	0.5	10.04	23.33	4.8	498.4	98.9							
7	1	32.2	8.72	31.94				18.2			1.77		31.7	
7	2	25.6	9.09	31.53				12.7			1.30		21.5	
7	3	21.3	9.22	31.45	3.9			10.4			1.02		17.1	
7	4	16.4	9.32	31.33				9.0			0.92		15.4	
7	5	8.3	9.62	30.80				3.4			0.62		9.7	
7	6	0.6	10.89	23.89	4.9			0.2			0.14		6.1	
10A	1	125.0						27.0	28.3	0.14	2.90	2.81	57.6	65.1
10A	2	97.4	8.51	32.56				22.3	27.5	0.16	2.45	2.69	54.3	59.4
10A	3	72.7	8.63	32.45				25.7	25.7	0.12	2.53	2.44	45.4	50.6
10A	4	46.7	8.78	32.08	4.4			20.4	20.8	0.55	1.99	1.95	34.2	33.3
10A	5	10.8	9.62	31.09	3.6			6.1	6.9	1.11	0.69	0.81	13.7	12.3
10A	6	1.8	10.27	27.64	6.0			0.7	0.5	0.34	0.22	0.18	20.5	18.3
12	1	25.2	9.67	31.21	2.7			5.6	7.7	1.06	0.90	0.88	12.8	12.1
12	2	15.0	9.97	30.68	3.4			4.7	5.2	0.74	0.74	0.69	9.6	9.1
12	3	5.8	10.05	30.45				4.7	4.8	0.92	0.71	0.69	8.8	9.1
12	4	2.4	10.08	30.35	3.5			4.4	4.9	0.96	0.71	0.67	9.0	9.8
14	1	88.8	8.04	32.54				23.3	26.2	0.42	2.46	2.25	19.5	43.2
14	2	75.8	8.19	32.41				22.3	25.3	0.15	2.36	2.17	40.9	41.3
14	3	52.2	8.46	32.07				20.0	21.1	0.67	2.10	1.89	32.8	31.7
14	4	31.2	9.32	31.51	2.1			9.9	10.3	1.27	1.22	1.08	16.8	16.1
14	5	10.7	10.17	30.73	4.9			2.9	3.2	0.51	0.59	0.54	6.7	6.7
14	6	2.3	10.41	29.77	5.3			1.8	2.4	0.50	0.41	0.49	6.6	5.3
15A	1	87.8	7.94	32.61				20.0	27.4	0.78	2.47	2.32	44.6	48.3
15A	2	75.1	8.22	32.43				23.9	25.2	0.00	2.57	2.13	38.6	40.2
15A	3	51.1	8.51	32.02				20.5	21.5	0.47	2.30	1.85	33.9	30.0
15A	4	31.6	9.11	31.58				11.8	12.2	1.57	1.40	1.20	19.2	17.0
15A	5	22.5	9.72	31.20				6.4	6.6	1.07	0.85	0.78	10.7	10.5
15A	6	11.5	9.98	30.96				4.0	4.2	0.68	0.66	0.61	7.4	7.9

Station	Bottle	Depth	°Temp.	°Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
15A	7	1.9	10.50	28.25				2.4	1.4	0.06	0.48	0.29	7.1	8.9
15B	1	30.8	9.16	31.46	2.2	189.1	40.3							
15B	2	10.8	10.11	30.89	4.0	304.9	63.3							
15B	3	1.8	10.55	27.47	4.8	494.0	96.0							
17	1	92.4	8.09	32.54				25.2			2.35		48.8	
17	2	76.8	8.21	32.47				25.0			2.34		52.1	
17	3	52.7	8.74	31.97				19.3			1.96		38.3	
17	4	32.0	9.18	31.53				11.7			1.29		25.4	
17	5	22.0	9.29	31.39	3.4			9.6			1.10		22.2	
17	6	11.6	9.65	31.00	4.4			7.0			0.76		13.5	
17	7	1.6	10.65	25.90	3.4			0.3			0.19		13.5	
19	1	85.8	8.19	32.51										
21	1	94.4	8.09	32.54				26.2			2.38		57.0	
21	2	51.1	8.99	31.78				15.3			1.56		28.1	
21	3	25.6	9.54	31.35	2.9			7.9			1.03		20.7	
21	4	11.5	9.85	31.04	3.8			4.6			0.64		11.8	
21	5	1.6	10.44	28.43	6.8			1.4			0.45		10.1	
23	1	84.9	8.03	32.55				26.2			2.45		56.3	
23	2	51.9	8.64	32.02				19.3			1.90		31.3	
23	3	31.2	9.36	31.49				9.0			0.72		16.1	
23	4	22.2	9.56	31.32	2.8			6.6			0.87		13.1	
23	5	12.1	9.72	30.95	3.7			4.9			0.77		11.0	
23	6	2.1	10.63	28.17	4.4			0.6			0.42		7.8	
25	1	67.0	8.36	32.21				20.1	24.2	0.81	2.00	2.07	31.5	40.2
25	2	52.0	8.72	31.88				16.0	18.6	1.55	1.68	1.67	22.4	28.2
25	3	31.7	9.14	31.54				12.9	13.2	1.85	1.08	1.25	15.4	20.9
25	4	21.4	9.29	31.30	2.4			8.1	9.3	1.33	1.06	0.96	11.2	15.5
25	5	11.5	9.45	31.02	3.9			5.4	6.0	0.71	0.74	0.71	6.4	12.5
25	6	1.5	10.71	25.46	4.3			0.2	0.3	0.00	0.37	0.22	0.3	9.0
27	1	42.7	8.59	32.00				16.4			1.87		26.9	
27	2	20.1	9.30	31.23	3.7			7.9			0.96		8.8	

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
27	5	10.8	9.43	30.95	4.4			5.6			0.73		5.5	
27	6	1.5	10.55	26.07	4.5			0.2			0.35		0.2	
28	1	83.3	8.17	32.30				23.9			2.10		36.3	
28	2	49.2	8.85	31.92				15.3			1.53		25.7	
28	3	28.8	9.45	31.58	7.7			3.5			0.73		9.5	
28	4	19.9	9.74	31.38				1.4			0.56		7.1	
28	5	9.4	10.13	31.06	9.2			1.1			0.52		6.7	
28	6	2.6	10.12	29.81				0.9			0.44		7.0	
31A	1	43.4	8.51	32.00				17.9			1.93		34.8	
31A	2	31.6	8.83	31.73				13.8			1.49		26.0	
31A	3	21.3	9.36	31.42				7.5			0.94		14.6	
31A	4	8.8	9.65	30.52				2.9			0.60		7.8	
31A	5	2.0	10.99	26.62				0.2			0.22		4.7	
31B	1	21.0	9.37	31.28	2.4	205.9	44.4							
31B	2	8.9	9.71	30.29	7.1	417.2	93.9							
31B	3	1.8	11.25	24.55	1.1	328.6	66.0							
34	1	35.1	8.66	31.66				14.3			1.87		24.5	
34	2	20.9	9.40	31.11	2.0	170.0	36.6	9.2			1.17		7.6	
34	3	12.0	9.60	30.66	4.9	316.3	72.2	4.3			0.68		1.7	
34	4	1.6	11.05	26.80	2.9	430.3	88.3	0.2			0.30		0.2	
41A	1	253.4	8.56	32.86				32.0			3.27		52.6	
41A	2	100.0	8.58	32.59				25.2			2.54		39.9	
41A	3	50.5	9.19	31.98				12.8			1.83		28.5	
41A	4	25.8	9.29	31.35				10.3			1.40		13.2	
41A	5	10.3	9.71	30.30				6.3			1.00		7.2	
41A	6	0.0	10.87	13.38				1.7			0.44		33.7	
41B	1	25.9	9.32	31.35	1.8	135.7	33.8							
41B	2	11.0	9.76	30.11	3.3	246.3	57.4							
41B	3	1.4	11.20	9.01	6.5	331.9	66.6							
42A	1	57.1	9.19	32.16					17.2	0.35		2.11		43.6
42A	2	32.0	9.62	31.92					12.9	0.79		2.25		45.2

Station	Bottle	Depth	°Temp.	°Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
42A	3	21.9	9.51	31.39					14.9	0.22		1.90		38.8
42A	4	10.3	9.55	30.35	2.5				12.6	0.44		1.46		31.1
42A	5	0.6	12.19	8.65	2.5				1.9	0.11		0.12		45.5
44	1	118.4	9.00	32.28					20.2	0.32		2.14		39.4
44	2	75.1	9.06	32.22					20.0	0.00		2.05		37.9
44	3	50.5	9.18	32.15					19.0	0.04		2.02		37.9
44	4	30.7	9.56	31.98					16.2	0.06		2.11		41.7
44	5	10.6	9.68	30.52	1.9				7.0	1.31		0.89		16.5
44	6	1.8	12.37	8.75	5.7				1.5	0.01		0.16		42.6
46	1	258.2	8.55	32.86					31.6	0.00		3.04		62.6
46	2	150.6	8.48	32.74					29.4	0.01		2.74		55.2
46	3	99.2	8.39	32.63					27.4	0.01		2.51		50.7
46	4	47.2	9.12	32.07					18.9	0.04		1.98		34.9
46	5	15.9	9.52	30.90	1.7				7.8	1.63		0.94		15.0
46	6	0.3	11.65	15.96					0.0	0.05		0.15		32.8
48	1	229.8	8.46	32.84					31.3	0.07		3.01		60.9
48	2	149.9	8.09	32.70					27.8	0.04		2.46		51.9
48	3	100.8	8.23	32.59					26.5	0.06		2.38		43.8
48	4	51.5	8.93	32.24					20.6	0.10		2.05		38.1
48	5	15.6	9.65	30.99	2.6				6.1	1.73		0.83		11.3
48	6	1.5	11.36	22.71	5.5				0.0	0.66		0.17		14.3
49	1	163.2	8.05	32.69					27.7	0.04		2.41		51.7
49	2	101.1	8.26	32.54						0.17				22.5
49	3	46.9	9.20	32.02					27.8	0.12		2.42		51.0
49	4	26.6	9.48	31.21					26.2	0.00		2.32		47.8
49	5	11.2	10.15	30.08					18.2	0.02		1.96		35.0
49	6	3.0	11.74	20.74	3.8				7.4	1.83		0.92		13.1
50	1	93.0	8.00	32.57				25.9	26.7	1.12	2.59	2.43	40.8	59.3
50	2	51.0	8.42	32.32				23.0	23.8	0.21	2.26	2.14	34.5	41.3
50	3	26.2	9.47	31.34				7.7	8.3	2.10	1.04	1.00	9.3	13.1
50	4	10.8	9.85	30.88				9.0	4.2	0.81	0.68	0.62	2.8	9.4

Station	Bottle	Depth	°Temp.	°Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
50	5	6.5	10.59	29.81				0.2	0.0	0.09	0.36	0.24	0.2	4.6
50	6	0.1	11.77	27.65				0.2	0.0	0.08	0.30	0.11	0.2	8.6
50A	1	26.1	9.49	31.34	1.6	131.4	27.2							
50B	2	7.4	10.64	29.65	6.7	527.8	105.2							
50C	3	1.6	12.28	26.64	4.0	522.3	104.6							
51	1	89.1	8.00	32.58					26.4	0.89		2.40		49.5
51	2	75.1	8.14	32.51					25.8	0.17		2.31		46.5
51	3	49.7	8.40	32.33					22.9	0.15		2.09		40.9
51	4	32.0	9.09	31.68					13.1	1.69		1.41		20.9
51	5	24.3	9.38	31.39	1.2	133.6	26.4		8.5	2.18		0.99		14.1
51	7	6.2	10.62	29.76	5.5	509.4	95.5		0.6	0.27		0.31		4.4
51	9	1.9	11.63	26.16	5.7	535.2	104.9		0.0	0.14		0.14		5.4
53	1	86.2	8.02	32.57					28.2	0.71		2.37		50.6
53	2	76.6	8.11	32.53					27.3	0.44		2.31		49.0
53	3	51.6	8.32	32.40					24.5	0.13		2.16		43.5
53	4	36.1	8.74	31.96					18.1	1.25		1.73		32.0
53	5	26.1	9.17	31.58	0.9	129.3	25.5		11.1	2.11		1.24		20.5
53	6	5.7	10.46	30.12	8.2	373.7	78.3		1.9	0.46		0.49		10.1
53	7	1.3	11.02	28.61	5.4	556.3	102.6		0.9	0.24		0.32		9.1
55	1	25.0			0.9	440.4	72.6							
55	2	5.0			5.6	599.7	113.0							
55	3	1.5			4.2	579.0	97.7							
56	1	87.6	7.99	32.59					28.1	1.13		2.39		50.6
56	2	74.3	8.14	32.47					26.7	0.36		2.31		48.2
56	3	48.6	8.36	32.25					24.6	0.37		2.08		43.3
56	4	33.6	8.86	31.85					17.9	1.35		1.68		33.5
56	5	24.8	9.19	31.48		105.9	22.5		11.2	2.25		1.20		21.9
56	6	6.4	10.67	29.45		645.7	121.1							
56	7	1.8	12.54	23.03		626.3	104.0		0.0	0.17		0.09		12.0
58	1	76.6	8.09	32.54					27.5	0.58		2.32		49.1
58	2	49.5	8.31	32.33					25.3	0.53		2.10		43.5

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
58	3	34.7	8.96	31.81										
58	4	26.4	9.22	31.52	1.1	73.3	22.7		11.2	2.23		1.20		21.6
58	5	6.3	10.87	29.40	3.8	491.9	103.2		0.1	0.35		0.25		4.8
58	7	1.1	13.16	21.58	3.3	545.6	97.8		0.0	0.30		0.81		10.5
60	1	89.4	7.98	32.64					26.8	1.08		2.34		48.6
60	2	75.1	8.12	32.52					27.1	1.27		2.33		48.4
60	3	51.1	8.38	32.29										
60	4	36.0	8.98	31.79					24.3	0.40		2.09		43.8
60	5	25.8	9.43	31.36					15.3	1.65		1.51		30.4
60	6	8.4	10.27	29.99	4.1									
60	7	5.5	10.66	29.59	4.0	301.2	63.0		2.4	0.80		0.50		9.8
60	8	1.4	12.84	22.35	3.3	438.4	91.5		0.2	0.47		0.26		4.8
62A	1	91.0	7.97	32.67					26.5	1.29		2.35		50.1
62A	2	72.9	8.15	32.53					25.8	0.24		2.28		45.3
62A	3	51.6	8.26	32.39					24.4	0.27		2.12		43.2
62A	4	34.6	8.96	31.83					15.1	1.90		1.49		27.9
62A	6	23.9	9.43	31.38	3.7	115.3	24.5		8.0	2.46		1.02		17.5
62A	7	6.7	10.47	29.84	4.0	410.4	86.4		0.2	0.35		0.26		5.1
62A	8	0.5	12.65	24.21		544.5	112.0		0.0	0.28		0.08		7.6
63	1	85.7	8.00	32.62				24.6	26.6	0.96	2.46	2.34	40.6	48.2
63	2	75.3	8.11	32.52				30.1	26.7	0.34	2.40	2.31	38.4	48.3
63	4	50.8	8.29	32.36				21.7	24.6	0.41	2.12	2.14	35.2	44.6
63	5	34.6	8.94	31.83				14.1	15.8	1.61	1.64	1.57	20.4	30.6
63	7	25.3	9.34	31.43	0.9	108.3	22.8	7.5	9.3	2.36	1.08	1.09	11.2	20.1
63	8	5.7	10.53	29.75	4.0	393.2	76.6	0.8	0.5	0.35	0.38	0.31	0.2	6.8
63	9	1.6	12.53	24.67	4.8	497.9	106.6	0.2	0.0	0.26	0.39	0.19	0.2	5.5
66	1	122.6	8.17	32.66				23.5	25.5	0.13	2.40	2.36	47.8	51.1
66	2	100.3	8.39	32.62				27.7	28.7	0.07	2.90	2.78	64.1	59.3
66	3	74.9	8.50	32.55				24.4	28.2	0.05	2.45	2.63	50.9	55.0
66	4	50.0	8.67	32.35				22.2	24.6	0.00	2.26	2.27	41.1	46.9
66	5	34.1	8.88	32.00				18.1	19.1	0.80	1.76	1.80	31.0	36.1

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
66	6	25.8	8.97	31.85				14.1	15.6	1.50	1.75	1.54	22.8	30.2
66	7	16.4	9.38	31.42				7.8	9.6	1.68	1.00	1.08	16.6	19.5
66	8	7.1	10.09	30.51				3.1	3.2	0.18	0.57	0.54	8.1	8.8
66	9	1.9	11.56	28.58				0.2	0.2	0.17	0.28	0.25	5.3	6.2
66A	1	25.2	8.94	31.85	0.9	93.5	27.5							
66A	2	6.2	10.03	30.52	2.3	218.0	47.9							
66B	3	1.8	11.86	27.57	4.8	554.9	106.7							
67	1	28.4	8.79	31.92					15.2	1.30		1.46		29.0
67	2	21.8	9.39	31.36					9.5	1.78		1.07		19.0
67	3	10.7	10.59	29.98					3.1	0.27		0.48		9.1
67	4	6.3	11.33	29.23					0.6	0.07		0.28		4.2
68	1	61.5	8.64	32.23					23.2	0.83		2.24		45.5
68	2	45.6	8.71	31.99					18.8	1.14		1.77		36.3
68	3	29.3	9.00	31.73					15.2	1.69		1.54		30.9
68	4	21.5	9.25	31.47					11.0	1.65		1.23		22.2
68	5	9.8	9.72	30.85					6.4	1.20		0.82		15.0
68	6	5.7	10.31	30.05					2.1	0.22		0.43		9.5
70	1	135.2	8.06	32.66					27.6	0.16		2.46		51.8
70	2	101.3	8.28	32.63					27.9	0.09		2.58		53.8
70	3	75.3	8.49	32.54					27.7	0.06		2.57		54.4
70	4	50.3	8.65	32.34					24.3	0.08		2.19		46.2
70	5	30.3	8.96	31.95					17.8	0.87		1.71		41.5
70	6	19.8	9.17	31.70					13.7	1.23		1.48		28.0
70	7	10.8	9.76	30.99					4.6	1.14		0.69		12.8
70	8	2.4	11.86	27.32					0.0	0.09		0.12		8.2
71	1	134.2	8.00	32.67										
71	2	93.3	8.17	32.57				27.1			2.66		38.4	
71	3	68.3	8.40	32.50				25.2			2.57		39.3	
71	4	48.1	8.60	32.35				21.2			2.32		33.4	
71	5	29.2	9.07	31.92				23.9			1.84		21.9	
71	6	19.0	9.27	31.59				12.0			1.54		15.3	

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
71	7	9.4	9.77	30.94				5.4			0.90		6.5	
71	8	2.1	12.09	25.77				0.4			0.48		1.2	
72	2	159.9	7.90	32.66					26.9	0.00		2.29		47.6
72	3	140.4	7.97	32.62					27.0	0.01		2.29		47.0
72	4	100.3	8.11	32.53					27.0	0.23		2.29		46.2
72	5	74.3	8.22	32.45					26.4	0.40		2.31		47.3
72	6	49.8	8.60	32.23					25.9	0.11		2.27		47.0
72	7	26.3	9.17	31.75					23.3	0.03		2.10		43.7
72	8	19.3	9.30	31.45					16.6	0.62		1.70		33.5
72	9	4.8	11.27	27.37					12.7	1.32		1.33		26.3
72	10	2.0	11.74	25.18					2.1			0.42		10.0
73	1	134.2	8.01	32.66	0.0									
73	2	134.2	8.01	32.66					27.1			2.38		49.5
73	3	99.5	8.19	32.59					26.9			2.41		50.5
73	4	73.5	8.41	32.47					25.9			2.37		48.5
73	5	49.5	8.63	32.31					23.1			2.11		42.2
74	1	50.8	8.71	32.22					23.5			2.32		42.8
74	2	26.6	9.12	31.71	0.9	113.2	24.2		14.2			1.32		26.0
74	3	6.5	10.79	29.50	4.7	526.6	103.0		1.0			0.47		8.8
74	4	2.6	11.46	28.50	4.6	424.7	80.7		1.0			0.40		7.1
76	1	106.3	9.02	32.27				17.7	19.4		2.23	1.67	33.2	39.3
76	2	73.7	9.06	32.23				17.7	20.3		2.01	1.61	33.6	39.3
76	3	49.1	9.25	32.11				16.8	18.7		2.16	1.69	29.9	39.3
76	4	32.7	9.49	31.81				12.4	16.8		2.06	2.34	30.1	41.2
76	5	25.0	9.41	31.48				11.6	15.1		1.71	1.77	24.0	35.5
76	6	9.6	9.76	30.39				4.9	6.5		0.90	0.93	8.4	18.0
76	7	6.8	9.89	30.00				5.0	5.5		0.86	1.09	8.1	15.9
76	8	1.5	12.51	8.58				5.8	1.3		0.97	0.30	14.1	44.9
76A	1	3.0	9.40	31.52	0.6									
76A	2	5.9	9.91	29.85	2.4	142.5	30.6							
76A	3	1.4	12.64	8.55	5.1	333.0	63.2							

Station	Bottle	Depth	°Temp.	°Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
78	1	226.6	8.56	32.88					32.9					56.4
78	2	149.8	8.49	32.76					30.9			4.66		55.0
78	3	99.8	8.54	32.65					28.8			4.33		51.5
78	4	75.4	8.58	32.58					26.6			3.33		47.7
78	5	40.4	8.96	32.25					21.2			3.45		39.4
78	6	21.3	9.28	31.58	0.7				15.3			3.45		29.2
78	7	10.6	9.71	30.65	0.9				7.6			2.11		16.5
78	8	1.8	12.40	9.10	9.3				0.6			0.22		43.0
80	1	252.1	8.49	32.86				31.3	32.1		3.19	2.37	65.6	64.5
80	2	149.6	8.26	32.73				28.8	29.5		2.69	2.32	57.5	56.0
80	3	100.4	8.23	32.61				25.5	27.2		2.46	2.01	50.2	53.3
80	4	75.0	8.29	32.54				25.9	11.7		2.44	1.51	47.6	19.9
80	5	49.2	8.64	32.37				21.3	22.8		2.11	1.87	43.3	42.1
80	6	28.3	9.22	31.85				17.3	18.4		1.92	2.78	42.8	36.5
80	7	18.9	9.28	31.43	0.7			11.5	26.2		1.34	2.00	23.9	49.7
80	8	8.9	9.86	30.46	1.1			3.2	4.9		0.85	0.97	12.6	12.0
80	9	1.8	12.23	14.13	10.4			0.7	0.4		0.36	0.36	25.5	27.6
82	1	167.6	8.12	32.73				30.5	29.0		3.20	2.25		52.2
82	2	149.6	8.16	32.71					28.8		2.82	2.13		52.2
82	3	98.7	8.08	32.58				26.7	27.3		2.55	2.23		47.7
82	4	71.5	8.22	32.51				24.9	26.7		2.58	2.51		46.7
82	5	46.6	8.71	32.27				22.3	23.3		2.40	2.32		42.1
82	6	28.8	9.19	31.95				27.0	18.5		2.23	1.74		34.9
82	7	20.6	9.20	31.61	0.6			13.3	14.2		2.55	1.73		22.6
82	8	8.8	9.76	30.82	1.0			5.8	6.0		0.85	0.91		12.1
82	9	1.4	11.63	20.75	6.5			1.4	1.5		0.29	0.58		18.7
85F	1	242.6	7.94	32.72				16.2	27.5		1.70	3.61		45.3
85F	2	149.5	7.96	32.68				24.5	26.6		2.52	2.09		46.4
85F	3	101.3	8.03	32.61				25.3	27.3		2.53	2.57		45.3
85F	4	77.0	8.14	32.53				27.1	26.9		2.63	1.51		47.0
85F	5	52.6	8.49	32.35					23.5			2.56		39.9

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
85F	6	31.8	8.70	32.10				19.4	20.9		2.17	1.67		33.5
85F	7	21.1	9.09	31.75	0.5			14.3	15.0		1.77	1.46		25.2
85F	8	10.3	9.74	30.99	1.5			11.1	6.0		1.24	1.06		12.4
85F	9	1.4	12.02	19.17	4.9			1.3	6.1		0.44	0.85		11.7
88A	1	76.6	8.08	32.59				25.9	27.7		2.72	2.52		48.2
88A	2	51.3	8.49	32.29				21.6	23.6		2.29	2.26		40.4
88A	3	30.3	9.01	31.74				11.9	13.1		1.58	1.58		23.1
88A	4	21.4	9.36	31.42	0.8				8.5		1.13	1.26		16.7
88A	5	7.4	10.30	30.02	3.9			0.3	0.3		0.43	0.46		8.9
88A	6	1.3	12.86	23.64	3.6			0.2	0.1		0.28	0.26		7.8
92	1	68.7	8.10	32.53				26.6	27.5		2.62			42.9
92	2	40.1	8.55	32.20				19.4	23.3		2.09	2.26		36.8
92	3	25.2	8.99	31.69				12.4	14.8		1.51	1.69		23.4
92	4	15.4	9.37	31.21	1.1			8.2	9.2		1.07	1.23		16.5
92	5	9.9	9.69	30.72	4.8			3.7	4.3		0.72	0.80		10.6
92	6	2.1	12.86	25.14	2.7			0.2	0.1		0.24	0.19		4.4
95	1	36.8	8.61	31.89				16.6	16.9		2.00	1.07		40.7
95	2	19.8	9.19	31.36				8.3	9.5		1.13	1.22		18.0
95	3	9.8	9.60	30.67				11.5	2.5		0.63			11.1
95	4	4.9	11.91	29.18				0.2	0.2		0.32	0.34		6.3
95	5	0.4	12.49	27.54				0.2	0.1		0.27	0.23		5.2
95A	1	21.1	9.19	31.31	0.8									
95A	2	10.8	9.60	30.71	5.2									
95A	3	1.5	12.52	27.10										
98	1	43.2	8.47	32.04				18.4	20.7		2.15	2.30		44.7
98	2	29.2	8.97	31.70				12.4	14.6		1.53	1.53		23.8
98	3	20.6	9.43	31.28	0.5			7.5	8.8		1.08	1.60		15.1
98	4	8.3	11.19	29.62	5.8			0.2	0.2		0.35	2.31		6.7
98	5	1.6	12.12	28.88	3.7			0.2	0.1		0.26	0.21		4.5
100	1	87.8	7.90	32.79				25.9	25.4		2.25	2.39	53.0	34.4
100	2	74.6	7.94	32.72				24.0	25.5		2.14	2.24	46.2	36.5

Station	Bottle	Depth	*Temp.	*Sal.	Chl a	POC	PON	NO3+NO2 (A)	NO3+NO2 (B)	NH4	PO4 (A)	PO4 (B)	Silicate (A)	Silicate (B)
100	3	49.0	8.39	32.22				20.2	22.3		1.98	2.01	39.8	32.4
100	5	25.7	9.15	31.64	0.9	133.1	18.2	12.6	12.2		1.40	1.33	24.9	18.3
100	7	14.1	10.99	29.99	6.5	452.4	92.9	0.3	0.2		0.36	0.38	7.8	6.5
100	9	1.6	11.48	29.73	5.7	471.3	97.7	0.2	0.0		0.33	0.33	6.7	7.3
103	1	83.4	7.94	32.76				24.4	26.2		2.10	2.14		42.1
103	2	74.9	8.04	32.63				24.3	26.7		2.16	2.22		46.0
103	3	50.2	8.36	32.34				20.4	21.7		1.92	2.23		33.0
103	4	30.1	8.93	31.89				13.7	25.9		1.64	2.34		42.1
103	5	18.4	9.36	31.55	1.1	179.6	25.3	8.4	9.3		1.17	1.25		15.2
103	7	11.3	10.06	30.61	7.1	392.0	74.6	1.5	1.3		0.53	0.54		7.5
103	8	2.3	12.29	27.74	3.4	524.2	79.7	0.2	0.0		0.23	0.26		2.8
107	1	131.9	8.09	32.67				15.4	28.6		1.55	2.76		49.3
107	2	101.1	8.18	32.66				26.9	28.8		2.70	3.25		48.8
107	3	76.1	8.45	32.60				27.3	29.2		2.87	2.95		51.0
107	4	51.5	8.61	32.45				16.2	26.8		1.70	2.62		41.6
107	5	29.6	8.88	31.96				16.2	18.9		1.86	1.95		24.0
107	6	19.5	9.25	31.57				10.7	12.5		1.32	1.51		15.4
107	7	10.2	10.05	30.68				5.7	7.0		0.83	0.96		9.8
107	8	1.9	11.57	28.24				0.2	0.1		0.33	0.36		6.4

Fig. 21 OE8805 CTD salinity section (stn 12 - 7) (Trevor Channel)

Fig. 22 OE8805 CTD temperature section (stn 12 - 7) (Trevor Channel)

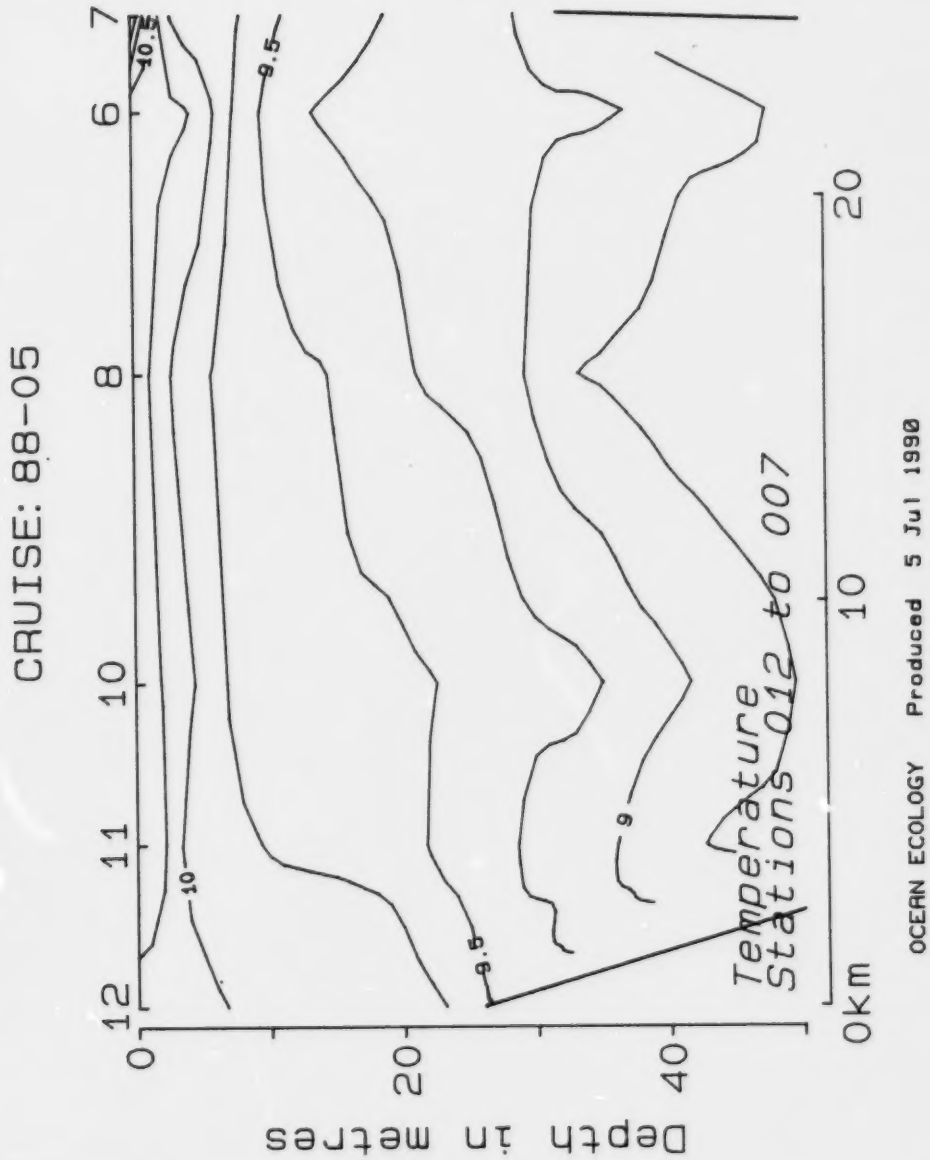


Fig. 23 OE8805 CTD % transmission section (stn 12 - 7) (Trevor Channel)

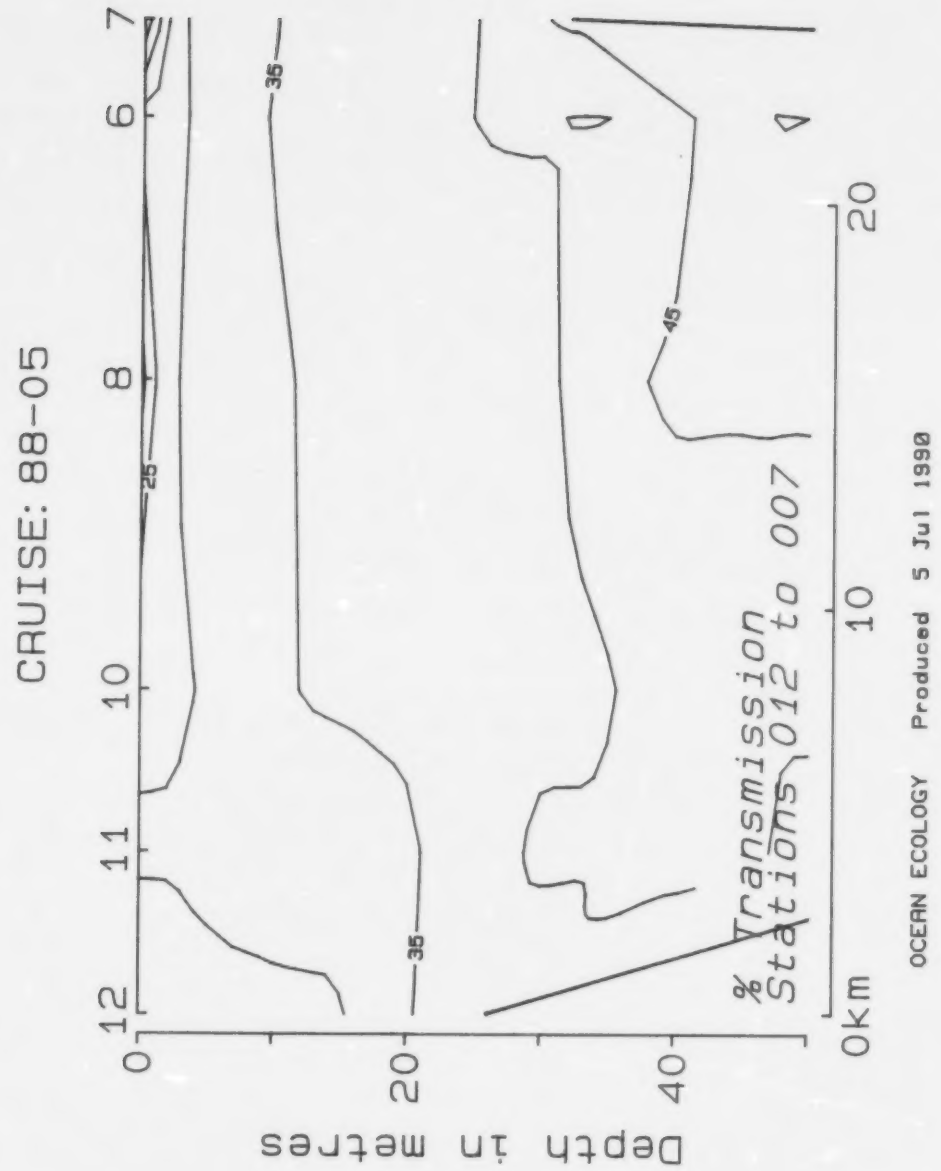


Fig. 24 OE8805 CTD salinity section (stn 84 - 76) (Alberni Inlet)

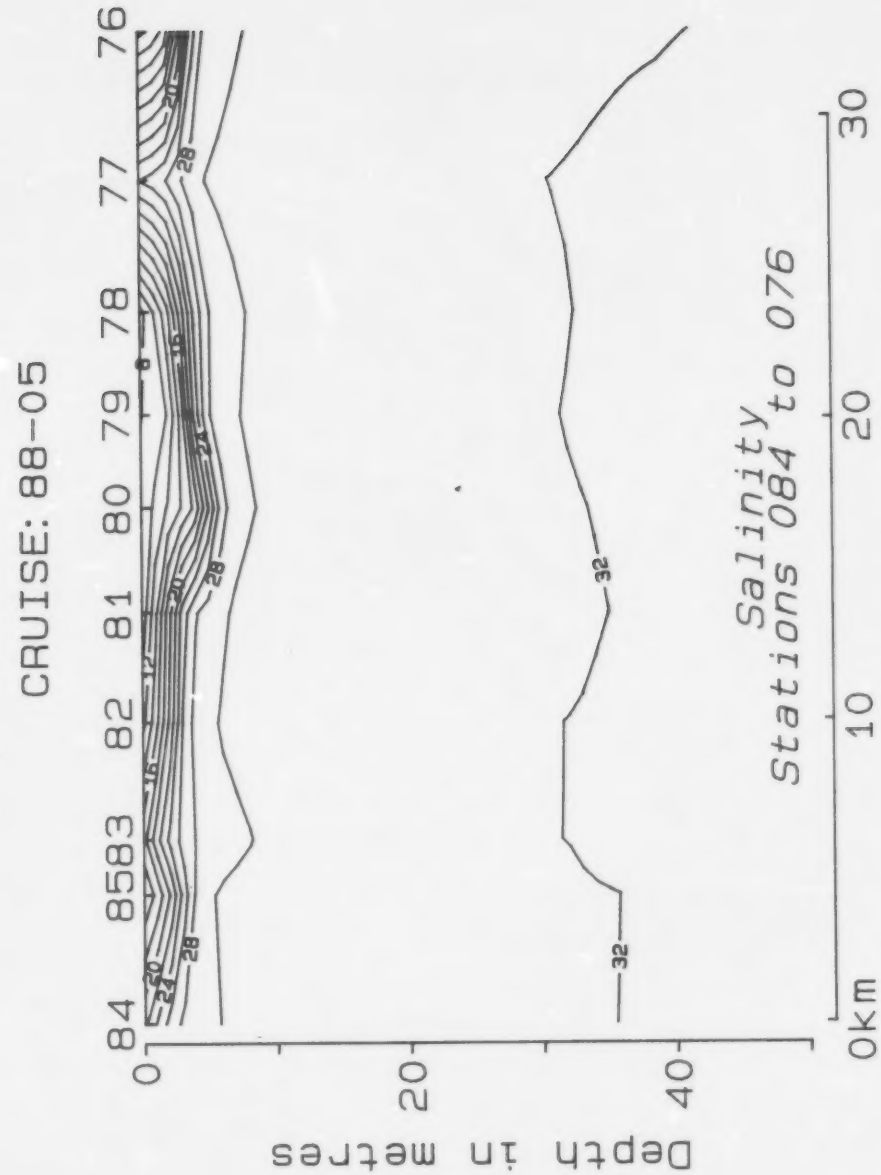

CRUISE: 88-05
84 8583 82 81 80 79 78 77 76
Depth in metres
0 20 40
0km 10 20 30
Salinity
Stations 084 to 076
OCEAN ECOLOGY Produced 5 Jul 1990

Fig. 25 OE8805 CTD temperature section (stn 84 - 76) (Alberni Inlet)

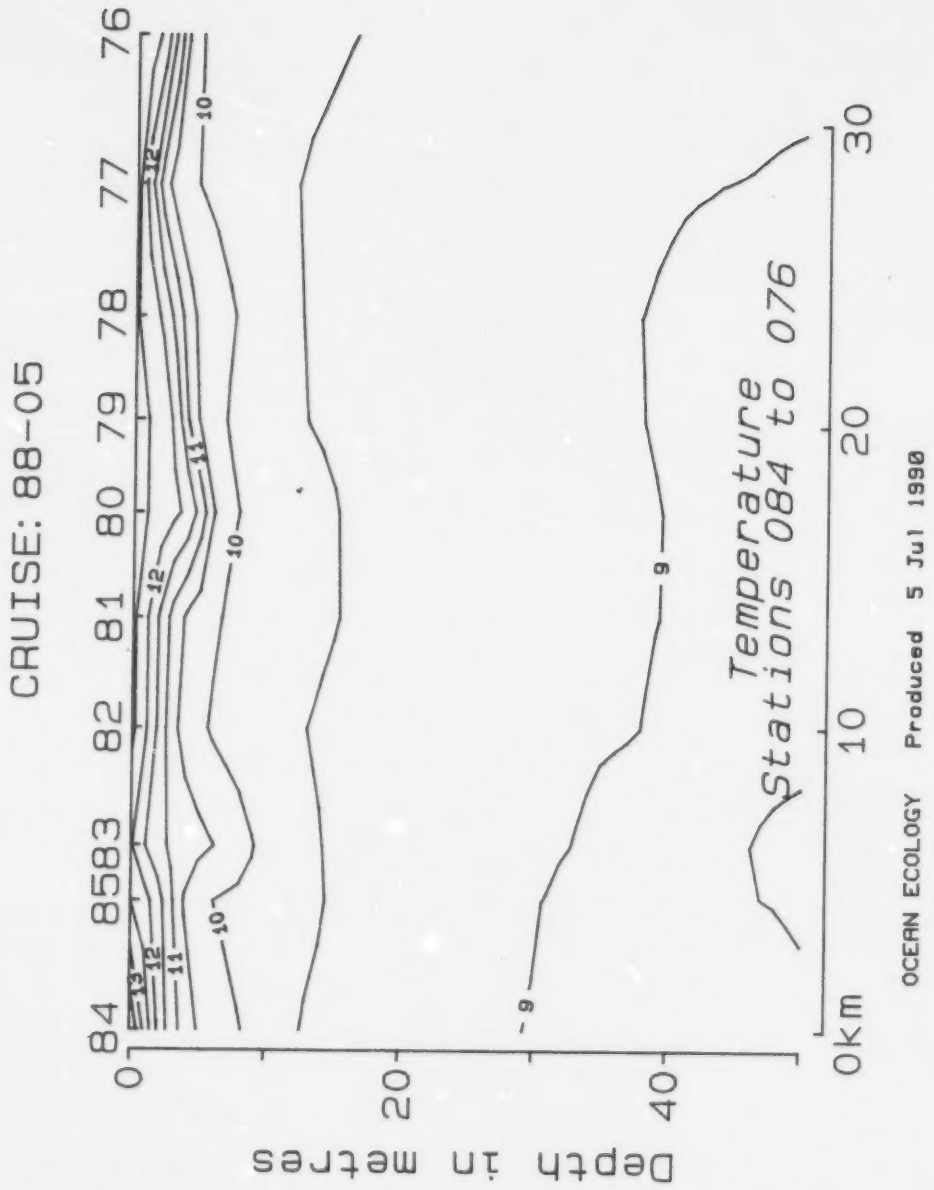
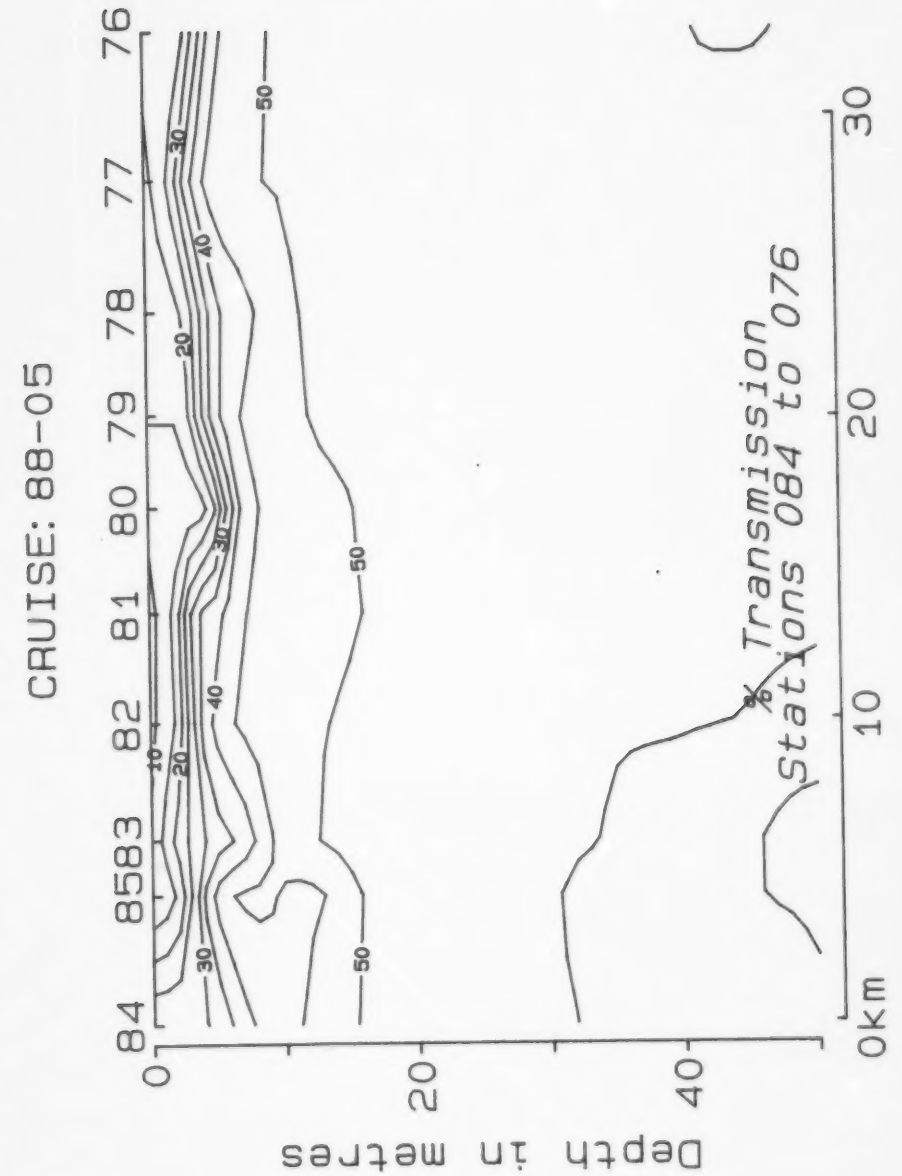


Fig. 26 OE8805 CTD % transmission section (stn 84 - 76) (Alberni Inlet)



DATA SECTION 5

BACTERIA ABUNDANCE

Table 4 OE8805 Bacteria abundance and frequency of dividing cells

TABLE 4: BACTERIA ABUNDANCE: CRUISE OE8805

Concentrations in cells.ml-1 x 10^-5

Std = 1 standard deviation of the count

Station	Bottle	Depth	Concentration	% Div.	Std
6B	1	45.8	7.1	20	0.7
6B	2	21.0	5.7	13	2.7
6B	3	0.5	7.6	8	2.7
14	4	31.2	4.4	11	1.1
14	5	10.7	4.9	12	0.8
14	6	2.3	5.8	13	1.1
15A	1	87.8	5.3	15	0.9
15A	2	75.1	4.7	14	0.7
15A	3	51.1	4.3	14	0.8
15A	4	31.6	3.8	16	0.5
15A	5	22.5	4.0	15	0.4
15A	6	11.5	2.7	14	0.5
15A	7	1.9	1.6	14	1.0
15B	1	30.8	3.1	13	0.6
15B	3	1.8	4.7	11	0.9
17	4	32.0	4.4	13	0.7
17	5	22.0	4.9	14	0.9
17	6	11.6	3.4	5	0.6
17	7	1.6	3.9	10	0.7
21	1	94.4	2.0	10	0.6
21	2	51.1	3.9	8	0.2
21	3	25.6	4.0	10	0.4
21	4	11.5	3.0	12	0.4
21	5	1.6	4.5	10	0.7
28	2	49.2	2.2	4	0.3
28	3	28.3	2.7	4	0.6
28	5	9.4	3.1	4	0.4
31A	1	43.4	2.4	4	0.4
31A	2	31.6	2.6	4	0.3
31A	3	21.3	2.4	3	0.5
31A	4	8.8	2.9	4	0.3
31A	5	2.0	2.8	5	0.3
34	1	35.1	2.3	5	0.2
34	2	20.9	3.0	5	0.4
34	3	12.0	3.0	5	0.6
34	4	1.6	4.1	7	0.7
41A	1	253.4	3.3	20	0.1
41A	2	100.0	6.9	14	0.3
41A	3	50.5	1.7	8	0.2
41A	4	25.8	2.1	7	0.5
41A	5	10.3	3.5	8	0.5
41A	6	0.0	4.7	12	0.7
50	1	93.0	2.1	13	0.2
50	2	51.0	1.9	10	0.3
50	3	26.2	2.6	9	0.4
50	4	10.8	5.4	10	0.7
50	5	6.5	7.5	11	0.8
50	6	0.1	9.1	12	2.2
63	1	85.7	1.4	10	0.4
63	2	75.3	1.8	9	0.4
63	4	50.8	1.8	8	0.3
63	5	34.6	2.1	10	0.3
63	7	25.3	2.4	8	0.4
63	8	5.7	11.7	7	1.9

Station	Bottle	Depth	Concentration	% Div.	Std
63	9	1.6	10.2	9	1.2
66	1	122.6	1.6	6	0.5
66	2	100.3	2.5	8	0.5
66	3	74.9	3.4	16	0.5
66	4	50.0	3.8	13	0.8
66	5	34.1	3.8	14	0.4
66	6	25.8	3.0	15	0.6
66	7	16.4	3.6	13	0.4
66	8	7.1	7.3	11	0.9
66	9	1.9	9.7	10	1.6
76	1	106.3	1.9	15	0.3
76	2	73.7	1.8	16	0.4
76	3	49.1	1.4	20	0.2
76	4	32.7	1.3	10	0.3
76	5	25.0	1.1	15	0.2
76	6	9.6	1.6	15	0.4
76	7	6.8	2.1	15	0.3
76	8	1.5	1.8	13	0.5
76	9	0.0	5.7	18	1.1
95	3	9.8	2.7	13	0.6
95	4	4.9	3.1	12	0.7
95	5	0.4	3.4	11	0.6
98	3	20.6	1.8	11	0.4
98	4	8.3	5.0	18	0.5
98	5	1.6	5.7	10	1.0
100	5	25.7	2.6	12	0.5
103	5	18.4	3.9	10	0.5
103	7	11.3	2.9	17	0.3
103	8	2.3	3.0	17	0.5

DATA SECTION 6

PHYTOPLANKTON IDENTITY AND ABUNDANCE

Table 5 Phytoplankton taxonomic list

Table 6 OE8805 Phytoplankton identity and abundance

TABLE 5: PHYTOPLANKTON TAXONOMIC LIST (WITH ABBREVIATIONS USED IN DATA RECORDS)

	Abbreviations in data records		
Chrysophyta			
Chrysophyceae			
Ochromonadales			
Ochromonadaceae			
Ochromonas spp.	ochromonas	spp.	
Dinobryaceae			
Dinobryon spp.	dinobryon	spp.	
Dictyochales			
Dictyochaceae			
Dictyocha speculum	dictyocha	speculum	
Chromulinales			
Pedinellaceae			
Apedinella spinifera	apedinella	spinifera	
Haptophyta			
Haptophyceae			
Prymnesiales			
Prymnesiaceae			
Chrysochromulina spp. (0-5um)	chrysochro	spp.	0-5
C. spp. (6-10 um)	chrysochro	spp.	6-10
C. spp. (10-15 um)	chrysochro	spp.	10-15
Corymbellus aureus	corymbellu	aureus	
Bacillariophyta			
Bacillariophyceae			
Centrales			
Corethronaceae			
Corethron criophilum	corethron	criophilum	
Leptocylindraceae			
Schroederalla delicatula	schroedere	delicatula	
Leptocylindrus danicus	leptocylin	danicus	
L. minimus	leptocylin	minimus	
Actinodiscaceae			
Actinptychus undulatus	actinoptyc	undulatus	
Coscinodiscaceae			
Melosira moniliformis	melosira	moniliformis	
Paralia sulcata	paralia	sulcata	
Stephanopyxis nipponica	stephanopy	nipponica	
Skeletonema costatum	skeletonem	costatum	
Thalasiossira spp.	thalassios	spp.	
T. spp. (<10 um)	thalassios	spp.	<10
T. gravida (syn. T. rotula)	thalassios	rotula	
T. aestivalis	thalassios	aestivalis	
T. anguste-lineatum	thalassios	anguste-line	
T. eccentrica	thalassios	eccentrica	
T. nordenskioldii	thalassios	nordenskiold	
Coscinodisous spp.	coscinodis	spp.	
C. radiatus	coscinodis	radiatus	
Biddulphiaceae			
Eucampia zoodiacus	eucampia	zoodiacus	
Cerataulina pelagica	cerataulin	pelagica	

Chaetoceraceae		
	Chaetoceros spp. (cells)	chaetocero spp. cells
	C. affine	chaetocero affine
	C. compressum	chaetocero compressum
	C. concavicorne	chaetocero concavicorne
	C. convolutum	chaetocero convolutum
	C. debile	chaetocero debile
	C. decipiens	chaetocero decipiens
	C. laciniosum	chaetocero laciniosum
	C. pseudocrinitum	chaetocero pseudocrinit
	C. radicans	chaetocero radicans
	C. septentrionalis	chaetocero septentrional
	C. socialis	chaetocero socialis
Rhizosoleniaceae		
	Rhizosolenia alata f. alata	rhizosolen alata f. alata
	R. fragilissima	rhizosolen fragilissima
	R. setigera	rhizosolen setigera
	R. stolterfothi	rhizosolen stolterfothi
Pennales		
Fragilariaceae		
	Fragilaria spp.	fragilaria spp.
	Asterionella formosa	asterionel formosa
	A. glaciales	asterionel glacialis
	Thalassiothrix frauenfeldii	thalassiot frauenfeldii
	Thalassionema nitzschiodes	thalassion nitzschoides
	Licmophora spp.	licmophora spp.
Naviculaceae		
	Gyrosigma spp. and Pleurosigma spp.	gyrosigma spp. pleurosigma
	Navicula spp.	navicula spp.
	Navicula wawrikae	navicula wawrikae
Nitzschiaceae		
	Nitzschia spp.	nitzschia spp.
	N. closterium	nitzschia closterium
	N. delicatissima	nitzschia delicatissim
	N. pacifica	nitzschia pacifica
	N. pungens	nitzschia pungens
Prasinophyta		
Prasinophyceae		
Pyramimonadales		
Nephroselmidaceae		
	Micromonas pusilla	micromonas pusilla
Polyblepharidaceae		
	Pyramimonas spp. (3-8 um)	pyramimona spp. 3-8
	Tetraselmis spp.	tetraselmi spp.

Euglenophyta			
Euglenophyceae			
Eutreptiales			
	Eutreptiella spp.	eutreptiel spp.	
Pyrrophyta			
Dinophyceae			
	spp. (5-15 um)	dinophycea spp.	5-15
Prorocentrales			
Prorocentraceae			
	Prorocentrum minimum	prorocentr minimum	
	P. minimum v. balticum	prorocentr minimum	v. balticum
	P. gracile	prorocentr gracile	
Dinophysiales			
Dinophysiaceae			
	Dinophysis spp.	dinophysis spp.	
	D. infundibulum	dinophysis infundibulum	
	D. ovum	dinophysis ovum	
Gymnodiniales			
Gymnodiniaceae			
	Gymnodinium spp. (5 - 10um)	gymnodiniu spp.	5-10
	G. spp. (10 - 15 um)	gymnodiniu spp.	10-15
	G. spp. (15 - 20 um)	gymnodiniu spp.	15-20
	G. spp. (20 - 50 um)	gymnodiniu spp.	20-50
	G. spp. (› 50um)	gymnodiniu spp.	› 50
	G. simplex	gymnodiniu simplex	
	Gyrodinium spp.	gyrodinium spp.	
	Katodinium rotundatum	katodinium rotundatum	
	Torodinium robustum	torodinium robustum	
Peridiniales			
Peridiniaceae			
	Scripsiella sp.1 (small)	scripsiell sp.1 (small)	
	Heterocapsa triquetra	heterocaps triquetra	
Gonyaulaceae			
	Gonyaulax digitale	gonyaulax digitale	
	G. spinifer	gonyaulax spinifera	
	G. triacantha	gonyaulax triacantha	
	Alexandrium ostenfeldii	alexandriu ostenfeldii	
	Protogonyaulax catanella	protogonya catanella	
Ceratiaceae			
	Ceratium fusus	ceratium fusus	
	C. minutum	ceratium minutum	
Cryptophyta			
Cryptophyceae			
Cryptomonadales			
	spp. (0-5 um)	cryptomona spp.	0-5
	spp. (5-10 um)	cryptomona spp.	5-10
	spp. (10.1-15 um)	cryptomona spp.	10.1-15
	spp. (15.1-20 um)	cryptomona spp.	15.1-20
	spp. (20-25 um)	cryptomona spp.	20-25

FLAGELLATES (autotrophic, unidentified)	spp.	flagellate spp.
Protozoa	Mesodinium rubrum	mesodinium rubrum

TABLE 6

Cruise 88-05

Total Abundance (no./litre)

Taxon	2B-4	4-7
ochromonas spp.	4.91E+04	6.16E+04
dinobryon spp.	0.00E+00	3.51E+03
dictyocha speculum	0.00E+00	3.51E+03
apedinella spinifera	0.00E+00	1.17E+03
dicrateria sp.	9.83E+04	4.78E+05
chrysochro spp. 0-5	1.60E+06	1.00E+06
chrysochro spp. 6-10	1.18E+05	1.32E+06
chrysochro spp. 10-15	1.97E+04	7.70E+04
schroedere delicatula	0.00E+00	2.34E+03
leptocylin minimus	1.48E+04	5.84E+03
skeletonem costatum	9.53E+05	1.17E+05
thalassios spp. < 10	0.00E+00	1.17E+03
thalassios rotula	5.45E+03	8.18E+03
thalassios aestivalis	6.54E+04	9.35E+03
thalassios nordenskiold	6.70E+04	6.66E+04
thalassios eccentrica	2.34E+03	3.51E+03
chaetocero spp. cells	6.23E+03	5.84E+03
chaetocero affine	4.00E+02	0.00E+00
chaetocero convolutum	0.00E+00	1.00E+02
chaetocero debile	3.12E+03	1.87E+04
chaetocero decipiens	0.00E+00	5.84E+03
chaetocero radicans	6.23E+03	1.29E+04
chaetocero socialis	0.00E+00	2.10E+04
rhizosolen fragilissima	9.12E+04	9.70E+04
asterionel glacialis	0.00E+00	1.17E+03
thalassion nitzschoides	7.79E+03	5.84E+03
navicula spp.	1.56E+03	1.17E+03
navicula wawrikae	2.00E+02	2.34E+03
nitzschia spp.	0.00E+00	7.01E+03
nitzschia delicatissim	1.87E+04	9.35E+03
nitzschia closterium	2.34E+03	1.17E+03
micromonas pusilla	3.73E+05	6.32E+05
pyramimona spp. 3-8	0.00E+00	6.16E+04
tetraselmi spp.	9.83E+03	0.00E+00
eutreptiel spp.	0.00E+00	1.00E+02

dinophycea spp. 5-15	1.56E+03	8.18E+03
dinophysis ovum	0.00E+00	2.00E+02
gonyaulax triacantha	0.00E+00	1.00E+02
alexandriu ostenfeldii	0.00E+00	2.00E+02
scripsiell sp.1 (small)	0.00E+00	9.35E+03
gymnodiniu spp. 10-15	7.79E+02	0.00E+00
gymnodiniu spp. 15-20	1.56E+03	0.00E+00
gymnodiniu spp. 20-50	4.67E+03	3.51E+04
gyrodinium spp.	1.09E+04	8.18E+03
torodinium robustum	0.00E+00	1.00E+02
heterocaps triquetra	7.79E+02	5.84E+03
ceratium minutum	0.00E+00	2.00E+02
cryptomona spp. 5-10	1.18E+05	2.16E+05
cryptomona spp. 10.1-15	2.94E+04	1.54E+05
cryptomona spp. 15.1-20	0.00E+00	7.70E+04
cryptomona spp. 0-5	2.75E+05	2.46E+05
cryptomona spp. 20-25	0.00E+00	1.54E+04
flagellate spp.	1.97E+04	1.85E+05
mesodinium rubrum	7.79E+02	3.51E+04

Cruise 88-05

Total Abundance (no./litre)

Taxon	6B-1	6C-4	6B-6	7-3	7-6
ochromonas spp.	2.95E+04	0.00E+00	1.40E+05	0.00E+00	0.00E+00
dinobryon spp.	9.83E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dictyocha speculum	7.79E+02	0.00E+00	2.34E+03	0.00E+00	0.00E+00
dicrateria sp.	5.90E+04	9.17E+04	4.49E+05	0.00E+00	0.00E+00
chrysochro spp. 0-5	8.65E+05	6.29E+05	1.08E+06	0.00E+00	0.00E+00
chrysochro spp. 6-10	0.00E+00	1.31E+04	1.54E+05	0.00E+00	0.00E+00
schroedere delicatula	0.00E+00	0.00E+00	6.00E+02	0.00E+00	0.00E+00
leptocylin minimus	0.00E+00	0.00E+00	4.67E+03	0.00E+00	0.00E+00
skeletonem costatum	4.70E+05	1.04E+06	3.19E+06	0.00E+00	0.00E+00
thalassios rotula	0.00E+00	0.00E+00	1.56E+03	0.00E+00	0.00E+00
thalassios aestivalis	6.23E+03	1.48E+04	5.45E+03	0.00E+00	0.00E+00
thalassios nordenskiold	5.69E+04	5.00E+04	1.64E+04	0.00E+00	0.00E+00
chaetocero spp. cells	0.00E+00	7.79E+02	0.00E+00	0.00E+00	0.00E+00
chaetocero compressum	0.00E+00	0.00E+00	7.01E+03	0.00E+00	0.00E+00
chaetocero debile	6.00E+02	0.00E+00	3.90E+03	0.00E+00	0.00E+00
chaetocero radicans	0.00E+00	0.00E+00	3.90E+03	0.00E+00	0.00E+00
rhizosolen delicatula	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
rhizosolen fragilissima	3.90E+03	3.12E+03	3.12E+03	0.00E+00	0.00E+00
thalassion nitzschoides	7.79E+02	1.00E+03	2.57E+04	0.00E+00	0.00E+00
grammatoph marina	0.00E+00	0.00E+00	8.00E+02	0.00E+00	0.00E+00
navicula spp.	0.00E+00	1.56E+03	7.79E+02	0.00E+00	0.00E+00
nitzschia delicatissim	7.79E+02	7.79E+02	0.00E+00	0.00E+00	0.00E+00
nitzschia closterium	2.00E+02	7.79E+02	7.79E+02	0.00E+00	0.00E+00
micromonas pusilla	1.08E+06	3.60E+05	1.88E+06	0.00E+00	0.00E+00
tetraselmi spp.	1.97E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
eutreptiel spp.	2.00E+02	0.00E+00	1.56E+03	0.00E+00	0.00E+00
dinophycea spp. 5-15	1.56E+03	0.00E+00	1.48E+04	0.00E+00	0.00E+00
gonyaulax spinifera	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
gonyaulax triacantha	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
scripsiell sp.1 (small)	0.00E+00	7.79E+02	2.34E+03	0.00E+00	0.00E+00
gymnodiniu spp. 10-15	3.12E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
gymnodiniu spp. 15-20	0.00E+00	2.34E+03	6.23E+03	0.00E+00	0.00E+00
gymnodiniu spp. 20-50	6.00E+02	0.00E+00	2.34E+04	0.00E+00	0.00E+00
gyrodinium spp.	5.45E+03	7.79E+02	0.00E+00	0.00E+00	0.00E+00
katodinium rotundatum	2.34E+03	7.79E+02	1.12E+05	0.00E+00	0.00E+00

heterocaps triquetra	2.00E+02	2.00E+02	1.56E+04	0.00E+00	0.00E+00
micracanth spp.	0.00E+00	0.00E+00	7.79E+02	0.00E+00	0.00E+00
cryptomona spp. 5-10	0.00E+00	0.00E+00	2.81E+05	0.00E+00	0.00E+00
cryptomona spp. 10.1 15	0.00E+00	1.31E+04	2.11E+05	0.00E+00	0.00E+00
cryptomona spp. 0 5	5.90E+04	2.62E+04	7.16E+05	0.00E+00	0.00E+00
flagellate spp.	3.94E+04	0.00E+00	2.81E+04	0.00E+00	0.00E+00
mesodinium rubrum	0.00E+00	7.79E+02	1.40E+04	0.00E+00	0.00E+00

Cruise 88-05

Total Abundance (no./litre)

Taxon	12-4	14-4	14-5	14-6
ochromonas spp.	2.95E+04	1.97E+04	3.93E+04	0.00E+00
dictyocha speculum	1.56E+03	2.00E+02	2.00E+02	2.34E+03
dicrateria sp.	2.56E+05	2.26E+05	4.32E+05	1.97E+05
chrysochro spp. 0 5	1.80E+06	1.84E+06	3.32E+06	9.24E+05
chrysochro spp. 6 10	2.56E+05	2.75E+05	3.73E+05	1.67E+05
chrysochro spp. 10 15	3.93E+04	0.00E+00	1.97E+04	0.00E+00
paralia sulcata	0.00E+00	6.00E+02	0.00E+00	0.00E+00
stephanopy nipponica	0.00E+00	0.00E+00	2.00E+02	0.00E+00
leptocylin danicus	1.17E+04	0.00E+00	0.00E+00	0.00E+00
leptocylin minimus	1.09E+04	8.57E+03	1.48E+04	1.71E+04
skeletonem costatum	9.53E+05	7.79E+04	2.80E+04	1.17E+04
thalassios rotula	0.00E+00	0.00E+00	7.79E+02	0.00E+00
thalassios aestivalis	5.45E+03	1.64E+04	1.32E+04	1.09E+04
thalassios nordenskiold	1.09E+04	3.19E+04	2.03E+04	3.90E+03
eucampia zoodiacus	2.00E+02	7.79E+02	0.00E+00	4.00E+02
chaetocero spp. cells	3.12E+03	3.90E+03	7.01E+03	1.79E+04
chaetocero compressum	3.12E+03	0.00E+00	7.79E+03	0.00E+00
chaetocero convolutum	0.00E+00	0.00E+00	0.00E+00	6.00E+02
chaetocero debile	1.56E+03	1.56E+03	5.45E+03	0.00E+00
chaetocero decipiens	4.00E+02	6.00E+02	7.01E+03	2.18E+04
chaetocero radicans	4.67E+03	2.34E+03	2.34E+03	0.00E+00
chaetocero socialis	0.00E+00	0.00E+00	3.12E+03	0.00E+00
rhizosolen fragilissima	2.34E+04	7.40E+04	1.25E+05	1.38E+05
thalassiot frauenfeldii	0.00E+00	2.00E+02	3.90E+03	0.00E+00
thalassion nitzschoides	9.35E+03	1.64E+04	1.87E+04	1.25E+04
licmophora spp.	2.00E+02	0.00E+00	0.00E+00	0.00E+00
gyrosigma spp. pleurosigma	0.00E+00	4.00E+02	0.00E+00	0.00E+00
navicula spp.	2.34E+03	0.00E+00	5.45E+03	3.12E+03
navicula wavrikae	1.80E+03	0.00E+00	6.00E+02	2.00E+02
nitzschia delicatissim	3.12E+03	1.01E+04	3.90E+03	3.12E+03
nitzschia pungens	4.00E+02	1.00E+03	1.20E+03	2.34E+03
nitzschia closterium	4.67E+03	3.90E+03	8.57E+03	3.90E+03
micromonas pusilla	8.94E+05	1.38E+06	4.46E+06	1.29E+06
tetraselmi spp.	5.90E+04	0.00E+00	0.00E+00	0.00E+00
eutreptiel spp.	3.12E+03	0.00E+00	1.56E+03	6.00E+02

dinophycea spp. 5-15	6.23E+03	0.00E+00	4.67E+03	6.23E+03
dinophysis ovum	2.00E+02	0.00E+00	2.00E+02	0.00E+00
scripsiell sp.1 (small)	9.35E+03	0.00E+00	0.00E+00	2.34E+03
gymnodiniu spp. 5 10	0.00E+00	0.00E+00	2.49E+04	0.00E+00
gymnodiniu spp. 10-15	0.00E+00	0.00E+00	1.56E+04	0.00E+00
gymnodiniu spp. 15-20	5.45E+03	7.79E+02	0.00E+00	2.03E+04
gymnodiniu spp. 20-50	1.56E+04	0.00E+00	3.90E+03	1.40E+04
gyrodinium spp.	4.67E+03	8.57E+03	8.57E+03	0.00E+00
katodinium rotundatum	1.97E+04	0.00E+00	1.97E+04	6.88E+04
heterocaps triquetra	3.90E+03	0.00E+00	0.00E+00	2.49E+04
micracanth spp.	1.56E+03	0.00E+00	0.00E+00	4.67E+03
cryptomona spp. 5-10	1.47E+05	2.95E+04	2.16E+05	1.47E+05
cryptomona spp. 10.1-15	1.28E+05	1.97E+04	7.86E+04	1.28E+05
cryptomona spp. 0-5	3.93E+05	3.44E+05	8.65E+05	1.97E+05
flagellate spp.	0.00E+00	5.90E+04	7.86E+04	9.83E+03
mesodinium rubrum	3.35E+04	0.00E+00	8.57E+03	1.95E+04

Cruise 88-05

Total Abundance (no./litre)

Taxon	15A 1	15A 2	15A-3	15A-4	15A-5
ochromonas spp.	0.00E+00	5.16E+04	6.55E+03	2.95E+04	3.93E+04
dictyocha speculum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
dicrateria sp.	1.57E+05	2.21E+05	6.55E+04	1.77E+05	1.47E+05
chrysochro spp. 0-5	2.36E+05	8.77E+05	9.11E+05	1.30E+06	1.81E+06
chrysochro spp. 6-10	1.97E+04	7.37E+03	1.97E+04	1.47E+05	2.06E+05
chrysochro spp. 10-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.83E+03
paralia sulcata	3.80E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
corethron criophilum	0.00E+00	0.00E+00	2.34E+03	0.00E+00	0.00E+00
leptocylin minimus	0.00E+00	0.00E+00	0.00E+00	9.35E+03	2.03E+04
skeletonem costatum	7.32E+04	3.48E+05	8.45E+05	1.67E+05	2.96E+04
thalassios aestivalis	2.10E+04	5.61E+04	3.66E+04	3.90E+03	5.45E+03
thalassios nordenskiold	4.36E+04	8.79E+04	6.78E+04	1.71E+04	1.64E+04
coscinodis spp.	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
chaetocero spp. cells	0.00E+00	0.00E+00	0.00E+00	2.34E+03	1.56E+03
chaetocero compressum	2.34E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chaetocero convolutum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+02
chaetocero debile	0.00E+00	9.35E+02	0.00E+00	5.45E+03	0.00E+00
chaetocero decipiens	0.00E+00	0.00E+00	0.00E+00	4.00E+02	8.00E+02
chaetocero radicans	0.00E+00	0.00E+00	0.00E+00	5.45E+03	0.00E+00
rhizosolen fragilissima	0.00E+00	1.87E+03	7.01E+03	9.12E+04	9.12E+04
rhizosolen setigera	0.00E+00	0.00E+00	0.00E+00	6.00E+02	2.00E+02
asterionel glacialis	0.00E+00	0.00E+00	7.79E+02	0.00E+00	0.00E+00
thalassiot frauenfeldii	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E+02
thalassion nitzschoides	3.90E+03	3.74E+03	2.03E+04	1.40E+04	2.65E+04
gyrosigma spp. pleurosigma	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
navicula spp.	0.00E+00	2.00E+02	0.00E+00	2.34E+03	8.57E+03
navicula wawrikae	0.00E+00	2.00E+02	0.00E+00	0.00E+00	1.80E+03
nitzschia delicatissim	7.79E+02	9.35E+02	4.67E+03	7.01E+03	1.17E+04
nitzschia pacifica	0.00E+00	0.00E+00	0.00E+00	1.80E+03	0.00E+00
nitzschia closterium	1.56E+03	9.35E+02	0.00E+00	7.79E+02	7.01E+03
micromonas pusilla	1.20E+06	1.14E+06	5.31E+05	1.21E+06	6.68E+05
tetraselmi spp.	0.00E+00	1.47E+04	0.00E+00	0.00E+00	0.00E+00
eutreptiel spp.	0.00E+00	0.00E+00	7.79E+02	0.00E+00	0.00E+00
dinophycea spp. 5-15	7.79E+02	0.00E+00	1.56E+03	0.00E+00	3.12E+03
prorocentr minimum	0.00E+00	0.00E+00	0.00E+00	3.90E+03	0.00E+00

gymnodiniu spp. 10-15	1.56E+03	2.80E+03	3.12E+03	3.12E+03	2.34E+03
gymnodiniu spp. 15-20	0.00E+00	0.00E+00	3.12E+03	3.90E+03	1.56E+03
gymnodiniu spp. 20-50	7.79E+03	1.87E+03	8.00E+02	7.79E+02	1.56E+03
gymnodiniu spp. › 50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
gyrodinium spp.	0.00E+00	4.67E+03	3.12E+03	9.35E+03	7.01E+03
torodinium robustum	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
cryptomona spp. 5-10	3.93E+04	5.16E+04	6.55E+03	3.93E+04	9.83E+04
cryptomona spp. 10.1-15	0.00E+00	0.00E+00	0.00E+00	1.97E+04	5.90E+04
cryptomona spp. 0-5	1.28E+05	3.54E+05	1.05E+05	2.16E+05	2.46E+05
flagellate spp.	2.95E+04	3.69E+04	5.24E+04	3.93E+04	0.00E+00
mesodinium rubrum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+02

Cruise 88 05

Total Abundance (no./litre)

Taxon	15A-6	15A-7	17-6	21-1	21-2
ochromonas spp.	1.47E+05	3.38E+05	0.00E+00	0.00E+00	4.59E+04
dictyocha speculum	1.17E+03	7.79E+03	7.79E+02	0.00E+00	0.00E+00
dicrateria sp.	1.10E+06	1.01E+06	3.54E+05	1.40E+04	8.52E+04
chrysochro spp. 0-5	3.45E+06	3.27E+06	2.72E+06	1.78E+05	7.27E+05
chrysochro spp. 6-10	2.74E+05	9.02E+05	1.53E+05	9.36E+03	8.52E+04
stephanopy nipponica	2.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
corethron criophilum	5.84E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
schroedere delicatula	0.00E+00	6.00E+02	0.00E+00	0.00E+00	0.00E+00
leptocylin minimus	5.55E+04	5.61E+04	4.05E+04	0.00E+00	3.12E+03
skeletonem costatum	2.05E+04	5.45E+04	2.59E+05	1.50E+05	3.41E+05
thalassios spp.	3.51E+03	1.56E+03	7.79E+02	0.00E+00	0.00E+00
thalassios spp. < 10	1.75E+03	1.56E+03	0.00E+00	0.00E+00	0.00E+00
thalassios rotula	0.00E+00	1.56E+03	7.79E+02	0.00E+00	0.00E+00
thalassios anguste-line	5.84E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
thalassios aestivalis	3.51E+03	7.01E+03	3.90E+03	4.67E+03	1.64E+04
thalassios nordenskiold	6.43E+03	1.64E+04	1.64E+04	1.48E+04	3.82E+04
eucampia zoodiacus	2.34E+03	3.12E+03	0.00E+00	0.00E+00	0.00E+00
chaetocero spp. cells	5.84E+02	0.00E+00	7.79E+02	0.00E+00	1.56E+03
chaetocero compressum	0.00E+00	0.00E+00	3.12E+03	0.00E+00	0.00E+00
chaetocero debile	8.77E+03	3.35E+04	4.67E+03	0.00E+00	1.56E+03
chaetocero decipiens	6.43E+03	4.67E+03	7.79E+02	0.00E+00	0.00E+00
chaetocero laciniosum	0.00E+00	1.56E+03	0.00E+00	0.00E+00	0.00E+00
chaetocero radicans	5.84E+03	1.09E+04	1.56E+03	0.00E+00	0.00E+00
chaetocero socialis	0.00E+00	7.79E+02	3.12E+03	0.00E+00	0.00E+00
rhizosolen alata f.alata	2.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
rhizosolen fragilissima	5.20E+04	3.90E+04	4.29E+04	0.00E+00	6.86E+04
rhizosolen setigera	0.00E+00	1.00E+02	0.00E+00	0.00E+00	0.00E+00
rhizosolen stolterfothi	1.17E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
thalassiot frauenfeldii	5.84E+02	0.00E+00	4.00E+02	0.00E+00	2.00E+02
thalassion nitzschoides	1.52E+04	0.00E+00	1.40E+04	7.79E+02	2.42E+04
gyrosigma spp. pleurosigma	1.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
navicula spp.	5.26E+03	5.45E+03	4.67E+03	7.79E+02	0.00E+00
naviçula wavrikae	2.34E+03	1.56E+03	4.00E+02	0.00E+00	2.00E+02
nitzschia spp.	5.84E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nitzschia delicatissim	1.46E+04	3.90E+03	4.67E+03	0.00E+00	4.67E+03

nitzschia pacifica	0.00E+00	0.00E+00	1.56E+03	0.00E+00	0.00E+00
nitzschia pungens	2.92E+03	2.34E+03	0.00E+00	0.00E+00	1.00E+03
nitzschia closteruim	1.05E+04	3.12E+03	2.34E+03	7.79E+02	7.79E+02
micromonas pusilla	3.47E+06	6.71E+06	1.82E+06	1.87E+04	5.83E+05
pyramimona spp. 3 8	0.00E+00	5.64E+04	0.00E+00	0.00E+00	0.00E+00
tetraselmi spp.	2.11E+04	2.82E+05	1.18E+04	0.00E+00	0.00E+00
eutreptiel spp.	5.84E+02	7.79E+02	0.00E+00	0.00E+00	0.00E+00
dinophycea spp. 5-15	5.84E+03	1.79E+04	5.45E+03	1.56E+03	3.12E+03
prorocentr minimum	0.00E+00	0.00E+00	2.96E+04	0.00E+00	0.00E+00
prorocentr gracile	0.00E+00	1.00E+02	0.00E+00	0.00E+00	0.00E+00
dinophysis ovum	0.00E+00	2.00E+02	0.00E+00	0.00E+00	0.00E+00
gonyaulax triacantha	0.00E+00	1.00E+02	0.00E+00	0.00E+00	0.00E+00
scripsiell sp.1 (small)	1.17E+03	3.27E+04	0.00E+00	0.00E+00	0.00E+00
gymnodiniu spp. 10-15	2.92E+03	2.49E+04	1.56E+03	0.00E+00	3.12E+03
gymnodiniu spp. 15-20	7.01E+03	6.23E+03	7.79E+04	3.12E+03	2.34E+03
gymnodiniu spp. 20-50	1.17E+03	4.60E+04	1.32E+04	7.79E+02	2.34E+03
gymnodiniu spp. › 50	5.84E+02	0.00E+00	0.00E+00	0.00E+00	4.00E+02
gymnodiniu simplex	4.21E+04	5.64E+04	0.00E+00	0.00E+00	0.00E+00
gyrodinium spp.	2.92E+03	1.09E+04	4.67E+03	0.00E+00	7.79E+03
katodinium rotundatum	0.00E+00	7.01E+03	0.00E+00	0.00E+00	0.00E+00
torodinium robustum	5.84E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
heterocaps triquetra	5.84E+02	4.05E+04	0.00E+00	0.00E+00	0.00E+00
micracanth spp.	1.17E+03	7.01E+03	0.00E+00	0.00E+00	0.00E+00
cryptomona spp. 5-10	2.95E+05	5.64E+05	3.07E+05	4.68E+03	5.24E+04
cryptomona spp. 10.1-15	2.11E+04	1.69E+05	9.43E+04	9.36E+03	2.62E+04
cryptomona spp. 0-5	8.42E+05	1.24E+06	6.49E+05	4.68E+04	9.83E+04
cryptomona spp. 20-25	2.11E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
flagellate spp.	2.11E+05	1.13E+05	0.00E+00	0.00E+00	3.93E+04
mesodinium rubrum	2.34E+03	5.45E+03	3.90E+03	0.00E+00	7.79E+02

Cruise 88 05

Total Abundance (no. litre)

Taxon	21-3	21 4	21-5	27-6
ochromonas spp.	9.83E+03	1.97E+04	0.00E+00	4.91E+03
dictyocha speculum	2.00E+02	7.79E+02	7.79E+02	2.34E+03
apedinella spinifera	0.00E+00	0.00E+00	9.35E+03	2.46E+04
dicrateria sp.	2.16E+05	1.47E+05	2.48E+05	8.84E+04
chrysochro spp. 0 5	2.41E+06	2.51E+06	1.86E+06	3.64E+05
chrysochro spp. 6 10	9.83E+04	2.56E+05	3.18E+05	7.86E+04
chrysochro spp. 10 15	0.00E+00	0.00E+00	0.00E+00	4.91E+03
stephanopy nipponica	0.00E+00	2.00E+02	0.00E+00	0.00E+00
schroedere delicatula	0.00E+00	0.00E+00	8.00E+02	0.00E+00
leptocylin danicus	0.00E+00	2.00E+02	3.12E+03	4.67E+03
leptocylin minimus	2.65E+04	3.74E+04	1.64E+04	1.56E+03
skeletonem costatum	1.57E+05	1.28E+05	5.90E+05	3.43E+04
thalassios rotula	7.79E+02	1.56E+03	1.56E+03	7.79E+02
thalassios aestivalis	9.35E+03	1.17E+04	7.79E+03	0.00E+00
thalassios nordenskiold	1.71E+04	1.64E+04	3.35E+04	6.23E+03
eucampia zoodiacus	0.00E+00	1.56E+03	0.00E+00	7.79E+02
chaetocero spp. cells	2.34E+03	7.79E+02	5.45E+03	2.34E+03
chaetocero compressum	4.67E+03	7.79E+02	0.00E+00	3.12E+03
chaetocero concavicorne	0.00E+00	0.00E+00	0.00E+00	2.00E+02
chaetocero convolutum	0.00E+00	1.80E+03	0.00E+00	0.00E+00
chaetocero debile	0.00E+00	4.67E+03	3.12E+04	4.21E+04
chaetocero decipiens	0.00E+00	1.00E+03	2.34E+03	1.56E+03
chaetocero laciniosum	0.00E+00	2.34E+03	7.79E+02	0.00E+00
chaetocero radicans	0.00E+00	0.00E+00	2.10E+04	1.09E+04
chaetocero socialis	0.00E+00	0.00E+00	1.48E+04	0.00E+00
rhizosolen fragilissima	1.22E+05	5.69E+04	5.45E+03	3.90E+03
rhizosolen setigera	6.00E+02	2.00E+02	0.00E+00	0.00E+00
thalassiot frauenfeldii	1.00E+03	6.00E+02	0.00E+00	0.00E+00
thalassion nitzschoides	2.96E+04	2.34E+04	3.90E+03	0.00E+00
gyrosigma spp. pleurosigma	2.00E+02	2.00E+02	0.00E+00	0.00E+00
navicula spp.	7.79E+02	2.34E+03	3.90E+05	7.79E+02
navicula wawrikae	8.00E+02	2.00E+02	4.00E+02	0.00E+00
nitzschia spp.	0.00E+00	0.00E+00	1.56E+03	0.00E+00
nitzschia delicatissim	4.67E+03	8.57E+03	4.67E+03	0.00E+00
nitzschia pacifica	0.00E+00	0.00E+00	3.12E+03	0.00E+00

nitzschia pungens	3.12E+03	0.00E+00	0.00E+00	7.79E+02
nitzschia closterium	3.12E+03	9.35E+03	3.12E+03	7.79E+02
micromonas pusilla	9.34E+05	2.02E+06	1.91E+06	4.13E+05
pyramimona spp. 3 8	0.00E+00	0.00E+00	1.18E+04	0.00E+00
tetraselmi spp.	9.83E+03	9.83E+03	7.08E+04	5.90E+04
eutreptiel spp.	7.79E+02	3.90E+03	3.90E+03	7.01E+03
dinophycea spp. 5 15	7.79E+02	3.12E+03	3.12E+03	0.00E+00
prorocentr minimum	1.95E+04	3.12E+04	2.73E+04	2.26E+04
dinophysis spp.	2.00E+02	0.00E+00	0.00E+00	0.00E+00
dinophysis ovum	0.00E+00	0.00E+00	2.00E+02	0.00E+00
gonyaulax digitale	0.00E+00	0.00E+00	8.00E+02	0.00E+00
gonyaulax triacantha	0.00E+00	0.00E+00	2.00E+02	0.00E+00
scripsiell sp.1 (small)	0.00E+00	0.00E+00	8.57E+03	6.23E+03
gymnodiniu spp. 5-10	3.12E+03	0.00E+00	0.00E+00	0.00E+00
gymnodiniu spp. 10-15	2.34E+03	0.00E+00	9.35E+03	5.45E+03
gymnodiniu spp. 15 20	0.00E+00	7.79E+03	5.45E+03	2.34E+03
gymnodiniu spp. 20-50	1.56E+03	7.79E+02	2.03E+04	4.05E+04
gymnodiniu spp. › 50	4.00E+02	0.00E+00	0.00E+00	0.00E+00
gymnodiniu simplex	0.00E+00	1.56E+03	0.00E+00	0.00E+00
gyrodinium spp.	7.79E+02	8.57E+03	6.23E+03	3.90E+03
katodinium rotundatum	1.97E+04	0.00E+00	3.12E+03	1.48E+04
torodinium robustum	0.00E+00	0.00E+00	7.79E+02	0.00E+00
heterocaps triquetra	0.00E+00	0.00E+00	6.23E+03	2.10E+04
micracanth spp.	0.00E+00	0.00E+00	3.90E+03	6.23E+03
cryptomona spp. 5-10	1.18E+05	1.77E+05	9.43E+04	6.39E+04
cryptomona spp. 10.1-15	0.00E+00	6.88E+04	1.18E+05	3.93E+04
cryptomona spp. 15.1-20	0.00E+00	0.00E+00	0.00E+00	4.91E+03
cryptomona spp. 0-5	3.24E+05	5.11E+05	5.42E+05	2.70E+05
cryptomona spp. 20-25	0.00E+00	0.00E+00	0.00E+00	4.91E+03
flagellate spp.	3.93E+04	1.97E+04	0.00E+00	0.00E+00
mesodinium rubrum	7.79E+02	1.56E+03	1.16E+05	1.09E+05

Cruise 88-05

Total Abundance (no./litre)

Taxon	28-2	28-3	28-5
ochromonas spp.	9.83E+03	9.83E+03	0.00E+00
dictyocha speculum	0.00E+00	0.00E+00	1.17E+03
dicrateria sp.	7.86E+04	1.38E+05	1.53E+05
chrysochro spp. 0-5	1.33E+06	1.96E+06	2.64E+06
chrysochro spp. 6-10	1.97E+05	2.16E+05	5.90E+05
chrysochro spp. 10 15	0.00E+00	0.00E+00	3.54E+04
stephanopy nipponica	0.00E+00	0.00E+00	4.00E+02
schroedere delicatula	0.00E+00	1.56E+03	0.00E+00
leptocylin minimus	7.79E+03	4.75E+04	1.05E+05
skeletonem costatum	1.43E+05	8.45E+05	4.84E+05
thalassios rotula	0.00E+00	5.45E+03	3.51E+03
thalassios aestivalis	2.03E+04	1.64E+04	8.18E+03
thalassios decipiens	0.00E+00	2.00E+02	0.00E+00
thalassios nordenskiold	7.95E+04	3.19E+04	1.87E+04
eucampia zoodiacus	0.00E+00	7.79E+02	1.17E+03
chaetocero spp. cells	7.79E+02	3.12E+03	2.34E+03
chaetocero compressum	0.00E+00	6.23E+03	1.64E+04
chaetocero convolutum	0.00E+00	0.00E+00	2.00E+02
chaetocero debile	0.00E+00	2.34E+03	1.17E+03
chaetocero decipiens	0.00E+00	0.00E+00	1.75E+04
chaetocero socialis	0.00E+00	4.67E+03	4.67E+03
rhizosolen fragilissima	2.26E+05	9.72E+05	8.18E+05
fragilaria spp.	0.00E+00	0.00E+00	2.34E+03
thalassiot frauenfeldii	2.00E+02	3.90E+03	2.34E+03
thalassion nitzschoides	5.06E+04	3.19E+04	2.34E+04
gyrosigma spp. pleurosigma	0.00E+00	2.00E+02	2.00E+02
navicula spp.	2.34E+03	3.90E+03	8.18E+03
navicula wawrikae	0.00E+00	4.00E+02	1.20E+03
nitzschia delicatissim	5.45E+03	7.79E+03	2.92E+04
nitzschia pacifica	0.00E+00	0.00E+00	9.35E+03
nitzschia pungens	2.00E+02	4.67E+03	0.00E+00
nitzschia closterium	3.90E+03	4.67E+03	1.17E+04
micromonas pusilla	1.03E+06	1.05E+06	1.75E+06
pyramimona spp. 3-8	0.00E+00	0.00E+00	2.36E+04
tetraselmi spp.	0.00E+00	5.90E+04	3.54E+04

eutreptiel spp.	0.00E+00	7.79E+02	7.01E+03
dinophycea spp. 5-15	7.79E+02	7.79E+02	1.17E+04
prorocentr minimum	1.09E+04	1.71E+04	1.17E+04
prorocentr minimum v.balticum	0.00E+00	0.00E+00	1.99E+04
dinophysis ovum	0.00E+00	0.00E+00	2.00E+02
gonyaulax spinifera	2.00E+02	0.00E+00	0.00E+00
gymnodiniu spp. 10-15	4.67E+03	3.12E+03	9.35E+03
gymnodiniu spp. 15-20	2.34E+03	0.00E+00	5.84E+03
gymnodiniu spp. 20-50	0.00E+00	0.00E+00	8.18E+03
gymnodiniu simplex	0.00E+00	0.00E+00	2.10E+04
gyrodinium spp.	2.57E+04	5.45E+03	1.40E+04
katodinium rotundatum	1.56E+03	7.79E+02	3.54E+04
heterocaps triquetra	0.00E+00	0.00E+00	2.00E+02
micracanth spp.	0.00E+00	0.00E+00	4.67E+03
cryptomona spp. 5-10	2.95E+04	1.57E+05	4.13E+05
cryptomona spp. 10.1-15	9.83E+03	0.00E+00	3.30E+05
cryptomona spp. 0-5	3.54E+05	5.60E+05	9.79E+05
flagellate spp.	2.95E+04	0.00E+00	0.00E+00
mesodinium rubrum	0.00E+00	7.79E+02	8.18E+03

Cruise 88-05

Total Abundance (no./litre)

Taxon	31A-1	31A-2	31A 3	31A-4	31A-5
ochromonas spp.	0.00E+00	1.28E+04	0.00E+00	0.00E+00	0.00E+00
dinobryon spp.	0.00E+00	0.00E+00	0.00E+00	6.88E+04	4.59E+04
dictyocha speculum	0.00E+00	0.00E+00	2.34E+03	7.79E+02	2.00E+02
apedinella spinifera	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E+04
corymbellu aureus	0.00E+00	0.00E+00	0.00E+00	2.06E+05	0.00E+00
dicrateria sp.	8.52E+04	4.49E+04	7.86E+04	2.36E+05	9.83E+04
chrysochro spp. 0 5	5.57E+05	8.59E+05	1.23E+06	1.20E+06	5.70E+05
chrysochro spp. 6-10	5.90E+04	1.22E+05	1.28E+05	9.83E+04	1.18E+05
chrysochro spp. 10-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.55E+03
stephanopy nipponica	0.00E+00	0.00E+00	0.00E+00	1.80E+03	0.00E+00
corethron criophilum	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
leptocylin danicus	0.00E+00	1.40E+03	0.00E+00	0.00E+00	0.00E+00
leptocylin minimus	1.56E+03	0.00E+00	2.42E+04	3.12E+03	3.90E+03
skeletonem costatum	3.01E+05	1.79E+05	2.26E+05	5.53E+04	1.25E+04
thalassios rotula	0.00E+00	3.90E+03	7.79E+02	2.10E+04	7.79E+02
thalassios aestivalis	1.56E+03	5.45E+03	3.12E+03	1.06E+05	7.79E+02
thalassios nordenskiold	5.45E+03	4.67E+03	7.79E+03	1.83E+05	0.00E+00
eucampia zoodiacus	0.00E+00	0.00E+00	1.56E+03	1.56E+03	0.00E+00
chaetocero spp. cells	3.12E+03	7.79E+02	2.34E+03	3.90E+03	1.56E+03
chaetocero affine	0.00E+00	0.00E+00	0.00E+00	1.56E+03	0.00E+00
chaetocero compressum	1.56E+03	0.00E+00	5.45E+03	4.20E+03	0.00E+00
chaetocero debile	7.79E+02	0.00E+00	7.79E+02	1.73E+05	7.01E+03
chaetocero laciniosum	0.00E+00	0.00E+00	0.00E+00	1.56E+03	0.00E+00
chaetocero pseudocrinit	0.00E+00	0.00E+00	0.00E+00	7.01E+03	0.00E+00
chaetocero radicans	0.00E+00	0.00E+00	0.00E+00	1.01E+04	5.45E+03
chaetocero socialis	0.00E+00	0.00E+00	4.67E+03	7.79E+02	0.00E+00
rhizosolen delicatula	1.40E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
rhizosolen fragilissima	1.32E+04	3.12E+03	2.26E+04	2.34E+03	2.34E+03
rhizosolen setigera	0.00E+00	2.00E+02	4.00E+02	0.00E+00	0.00E+00
asterionel glacialis	0.00E+00	0.00E+00	0.00E+00	7.79E+03	0.00E+00
thalassion nitzschoides	0.00E+00	7.79E+02	3.12E+03	0.00E+00	0.00E+00
gyrosigma spp. pleurosigma	2.00E+02	0.00E+00	2.00E+02	0.00E+00	0.00E+00
naviçula spp.	0.00E+00	7.79E+02	1.56E+03	1.56E+03	2.00E+02
naviçula wawrikae	0.00E+00	0.00E+00	0.00E+00	6.00E+02	0.00E+00
nitzschia delicatissim	9.35E+03	3.12E+03	5.45E+03	9.35E+03	0.00E+00

nitzschia pacifica	0.00E+00	0.00E+00	7.79E+02	4.00E+02	4.00E+02
nitzschia pungens	4.00E+02	1.00E+03	0.00E+00	0.00E+00	0.00E+00
nitzschia closterium	1.56E+03	0.00E+00	1.56E+03	0.00E+00	0.00E+00
micromonas pusilla	1.09E+06	5.96E+05	9.63E+05	2.60E+06	3.58E+06
pyramimona spp. 3 8	0.00E+00	0.00E+00	0.00E+00	2.95E+04	3.28E+04
tetraselmi spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E+04
eutreptiel spp.	0.00E+00	0.00E+00	2.00E+02	2.34E+03	7.79E+02
dinophycea spp. 5-15	0.00E+00	0.00E+00	0.00E+00	4.67E+03	3.12E+03
prorocentr minimum	0.00E+00	3.12E+03	3.12E+03	1.09E+04	5.45E+03
prorocentr minimum v.balticum	0.00E+00	0.00E+00	1.17E+04	2.10E+04	6.23E+03
scripsiell sp.1 (small)	0.00E+00	0.00E+00	7.79E+02	0.00E+00	1.56E+03
gymnodiniu spp. 10-15	3.90E+03	2.34E+03	7.79E+03	3.12E+03	4.67E+03
gymnodiniu spp. 15-20	1.56E+03	2.34E+03	7.79E+02	7.79E+03	7.79E+02
gymnodiniu spp. 20-50	1.32E+04	3.90E+03	8.57E+03	7.79E+03	1.32E+04
gymnodiniu spp. › 50	0.00E+00	0.00E+00	4.00E+02	0.00E+00	0.00E+00
gymnodiniu simplex	0.00E+00	0.00E+00	2.34E+03	7.79E+02	0.00E+00
gyrodinium spp.	9.35E+03	2.18E+04	8.57E+03	3.12E+03	1.56E+03
katodinium rotundatum	0.00E+00	7.79E+02	7.79E+02	0.00E+00	3.28E+04
torodinium robustum	0.00E+00	0.00E+00	0.00E+00	7.79E+02	0.00E+00
heterocaps triquetra	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E+03
micracanth spp.	0.00E+00	0.00E+00	0.00E+00	1.56E+03	2.34E+03
cryptomona spp. 5-10	6.55E+03	3.85E+04	1.28E+05	1.08E+05	1.31E+05
cryptomona spp. 10.1-15	0.00E+00	0.00E+00	3.93E+04	9.83E+03	5.24E+04
cryptomona spp. 0 5	7.21E+04	7.69E+04	2.75E+05	5.99E+05	6.09E+05
flagellate spp.	3.28E+04	2.56E+04	0.00E+00	2.95E+04	0.00E+00
mesodinium rubrum	1.56E+03	0.00E+00	7.79E+02	2.49E+04	3.19E+04

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Total Abundance (no./litre)

Taxon	34 1	34-2	34-3	34-4	41A-1
ochromonas spp.	7.80E+04	0.00E+00	0.00E+00	3.93E+04	0.00E+00
dinobryon spp.	0.00E+00	0.00E+00	9.51E+03	4.91E+04	0.00E+00
dictyocha speculum	0.00E+00	0.00E+00	7.79E+02	1.56E+03	0.00E+00
apedinella spinifera	0.00E+00	0.00E+00	0.00E+00	4.91E+04	0.00E+00
dicrateria sp.	6.94E+04	3.93E+04	2.76E+05	0.00E+00	2.46E+04
chrysochro spp. 0-5	3.64E+05	9.34E+05	1.09E+06	6.78E+05	4.91E+04
chrysochro spp. 6-10	8.67E+03	9.83E+04	1.62E+05	2.95E+04	0.00E+00
schroedere delicatula	0.00E+00	0.00E+00	0.00E+00	6.23E+03	0.00E+00
leptocylin danicus	7.79E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
leptocylin minimus	2.34E+03	2.26E+04	7.79E+03	0.00E+00	0.00E+00
skeletonem costatum	1.48E+04	2.96E+04	1.62E+05	3.12E+03	0.00E+00
thalassios spp. < 10	7.01E+03	1.01E+04	1.56E+03	0.00E+00	0.00E+00
thalassios rotula	0.00E+00	7.79E+02	2.10E+04	6.00E+02	0.00E+00
thalassios aestivalis	1.56E+03	4.67E+03	4.21E+04	3.12E+03	0.00E+00
thalassios nordenskiold	7.79E+02	7.79E+02	3.12E+04	1.25E+04	0.00E+00
actinoptyc undulatus	7.79E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
eucampia zoodiacus	0.00E+00	0.00E+00	3.12E+03	0.00E+00	0.00E+00
chaetocero spp. cells	7.79E+02	0.00E+00	1.56E+03	0.00E+00	0.00E+00
chaetocero affine	0.00E+00	0.00E+00	2.34E+03	0.00E+00	0.00E+00
chaetocero compressum	0.00E+00	0.00E+00	1.25E+04	3.74E+04	0.00E+00
chaetocero debile	0.00E+00	1.01E+04	5.92E+04	5.30E+04	0.00E+00
chaetocero decipiens	0.00E+00	0.00E+00	0.00E+00	4.00E+02	0.00E+00
chaetocero laciniosum	0.00E+00	0.00E+00	4.00E+02	0.00E+00	0.00E+00
chaetocero pseudocrinit	0.00E+00	0.00E+00	1.56E+03	0.00E+00	0.00E+00
chaetocero radicans	0.00E+00	4.67E+03	7.01E+03	4.67E+03	0.00E+00
chaetocero socialis	0.00E+00	3.90E+03	2.34E+03	0.00E+00	0.00E+00
rhizosolen delicatula	4.67E+03	6.00E+02	0.00E+00	0.00E+00	0.00E+00
rhizosolen fragilissima	3.12E+03	6.23E+03	1.25E+04	0.00E+00	0.00E+00
rhizosolen setigera	2.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
asterionel glacialis	0.00E+00	0.00E+00	2.34E+03	0.00E+00	0.00E+00
thalassion nitzschoides	1.56E+03	4.67E+03	7.79E+02	0.00E+00	3.90E+02
gyrosigma spp. pleurosigma	4.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
navicula spp.	0.00E+00	7.79E+02	1.56E+03	0.00E+00	0.00E+00
navicula wawrikae	0.00E+00	0.00E+00	2.00E+02	3.12E+03	0.00E+00
nitzschia spp.	1.56E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00

nitzschia delicatissim	9.35E+03	2.34E+03	7.79E+02	0.00E+00	0.00E+00
nitzschia pacifica	2.20E+03	0.00E+00	4.00E+02	8.00E+02	0.00E+00
nitzschia seriata	0.00E+00	8.00E+02	0.00E+00	3.12E+03	0.00E+00
nitzschia closterium	2.00E+02	2.34E+03	7.79E+03	0.00E+00	0.00E+00
micromonas pusilla	4.94E+05	1.36E+06	1.88E+06	5.80E+05	1.67E+05
pyramimona spp. 3-8	8.67E+03	0.00E+00	9.51E+03	6.88E+04	0.00E+00
tetraselmi spp.	0.00E+00	0.00E+00	1.90E+04	9.83E+03	0.00E+00
eutreptiel spp.	1.56E+03	7.79E+02	0.00E+00	7.79E+03	0.00E+00
dinophycea spp. 5-15	7.79E+02	3.12E+03	2.34E+03	6.23E+03	0.00E+00
prorocentr minimum	7.79E+02	1.01E+04	1.25E+04	6.23E+03	0.00E+00
prorocentr minimum v.balticum	0.00E+00	0.00E+00	1.56E+04	1.87E+04	0.00E+00
prorocentr gracile	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
dinophysis ovum	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
alexandriu ostenfeldii	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
scripsiell sp.1 (small)	0.00E+00	0.00E+00	0.00E+00	4.67E+03	0.00E+00
gymnodiniu spp. 10-15	1.56E+03	0.00E+00	2.34E+03	1.09E+04	0.00E+00
gymnodiniu spp. 15-20	0.00E+00	2.34E+03	3.90E+03	6.23E+03	3.90E+02
gymnodiniu spp. 20-50	9.35E+03	5.45E+03	1.32E+04	3.43E+04	0.00E+00
gymnodiniu spp. > 50	2.00E+02	4.00E+02	0.00E+00	0.00E+00	0.00E+00
gyrodinium spp.	2.02E+04	1.79E+04	5.45E+03	9.35E+03	1.17E+03
katodinium rotundatum	0.00E+00	0.00E+00	0.00E+00	3.93E+04	0.00E+00
heterocaps triquetra	0.00E+00	0.00E+00	0.00E+00	2.96E+04	0.00E+00
micracanth spp.	0.00E+00	0.00E+00	7.79E+02	7.79E+03	0.00E+00
protogonya catanella	0.00E+00	0.00E+00	0.00E+00	4.00E+02	0.00E+00
cryptomona spp. 5-10	4.34E+04	9.83E+04	1.14E+05	1.47E+05	7.37E+03
cryptomona spp. 10.1-15	2.60E+04	1.97E+04	9.76E+04	6.88E+04	0.00E+00
cryptomona spp. 15.1-20	0.00E+00	0.00E+00	0.00E+00	1.09E+04	0.00E+00
cryptomona spp. 0-5	1.73E+04	1.67E+05	4.47E+05	4.91E+05	1.97E+04
cryptomona spp. 20-25	0.00E+00	0.00E+00	9.51E+03	1.25E+04	0.00E+00
mesodinium rubrum	1.56E+03	0.00E+00	5.45E+03	4.83E+04	0.00E+00

Cruise 88 05

Total Abundance (no./litre)

Taxon	41A-2	41A-3	41A 4	41A-5	41A-6
ochromonas spp.	0.00E+00	0.00E+00	0.00E+00	4.76E+04	4.52E+05
dinobryon spp.	6.55E+03	0.00E+00	1.97E+04	9.51E+03	1.97E+04
dictyocha speculum	0.00E+00	0.00E+00	2.00E+02	0.00E+00	7.79E+02
dicrateria sp.	2.95E+04	1.47E+04	1.77E+05	1.43E+05	4.32E+05
chrysochro spp. 0-5	4.59E+04	2.31E+05	1.16E+06	1.07E+06	1.81E+06
chrysochro spp. 6-10	0.00E+00	9.83E+03	4.91E+04	1.19E+05	2.95E+05
melosira moniliformis	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E+02
stephanopy nipponica	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
corethron criophilum	0.00E+00	0.00E+00	0.00E+00	3.90E+03	0.00E+00
leptocylin minimus	0.00E+00	0.00E+00	0.00E+00	1.57E+03	0.00E+00
skeletonem costatum	3.60E+04	3.74E+04	2.49E+04	2.52E+05	6.72E+06
thalassios spp. < 10	0.00E+00	5.45E+03	5.45E+03	7.40E+03	1.87E+04
thalassios rotula	0.00E+00	0.00E+00	4.67E+03	3.90E+03	0.00E+00
thalassios anguste-line	0.00E+00	0.00E+00	0.00E+00	3.00E+02	0.00E+00
thalassios aestivalis	0.00E+00	3.12E+03	7.79E+03	1.25E+04	0.00E+00
thalassios decipiens	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
thalassios nordenskiold	3.90E+02	0.00E+00	3.12E+03	7.01E+03	7.01E+03
thalassios eccentrica	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
eucampia zoodiacus	0.00E+00	0.00E+00	0.00E+00	3.90E+02	0.00E+00
cerataulin pelagica	0.00E+00	0.00E+00	0.00E+00	3.90E+02	0.00E+00
chaetocero compressum	0.00E+00	0.00E+00	0.00E+00	3.12E+03	0.00E+00
chaetocero debile	0.00E+00	0.00E+00	1.64E+04	1.17E+03	0.00E+00
chaetocero socialis	0.00E+00	0.00E+00	0.00E+00	3.12E+03	0.00E+00
rhizosolen fragilissima	0.00E+00	4.67E+03	7.79E+02	1.32E+04	0.00E+00
fragilaria spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E+03
asterionel glacialis	0.00E+00	7.79E+02	0.00E+00	2.73E+03	0.00E+00
asterionel formosa	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E+02
thalassion nitzschoides	7.79E+02	2.34E+03	2.34E+03	2.34E+03	6.00E+04
navicula spp.	0.00E+00	0.00E+00	7.79E+02	1.17E+03	0.00E+00
navicula wawrikae	0.00E+00	0.00E+00	4.00E+02	7.79E+02	0.00E+00
nitzschia delicatissim	3.90E+02	7.79E+02	7.79E+02	0.00E+00	0.00E+00
nitzschia pacifica	0.00E+00	0.00E+00	0.00E+00	1.00E+02	0.00E+00
nitzschia closterium	5.00E+02	7.79E+02	3.90E+03	1.17E+03	0.00E+00
micromonas pusilla	2.29E+05	3.24E+05	1.32E+06	3.95E+05	1.10E+06
pyramimona spp. 3-8	0.00E+00	0.00E+00	0.00E+00	4.76E+03	7.86E+04

tetraselmi spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E+04
eutreptiel spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E+03
dinophycea spp. 5-15	3.90E+02	0.00E+00	0.00E+00	0.00E+00	1.48E+04
prorocentr minimum	0.00E+00	7.79E+02	1.56E+04	7.01E+03	1.32E+04
prorocentr minimum v.balticum	0.00E+00	0.00E+00	7.01E+03	3.90E+02	5.45E+03
dinophysis ovum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
gymnodiniu spp. 10-15	1.56E+03	1.56E+03	3.12E+03	1.95E+03	0.00E+00
gymnodiniu spp. 15-20	0.00E+00	0.00E+00	3.12E+03	7.79E+02	0.00E+00
gymnodiniu spp. 20-50	3.90E+02	7.79E+02	1.56E+03	3.12E+03	7.79E+02
gymnodiniu spp. › 50	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
gyrodinium spp.	9.83E+03	7.79E+02	3.90E+03	1.60E+04	0.00E+00
katodinium rotundatum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+05
torodinium robustum	3.90E+02	0.00E+00	0.00E+00	3.90E+02	0.00E+00
ceratium minutum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
cryptomona spp. 5-10	6.55E+03	1.47E+04	6.88E+04	9.03E+04	1.67E+06
cryptomona spp. 10.1-15	0.00E+00	4.91E+03	4.91E+04	4.76E+04	8.65E+05
cryptomona spp. 15.1-20	0.00E+00	0.00E+00	0.00E+00	4.76E+03	3.93E+04
cryptomona spp. 0-5	1.97E+04	5.41E+04	3.54E+05	1.90E+05	3.14E+05
flagellate spp.	0.00E+00	0.00E+00	9.83E+03	0.00E+00	0.00E+00
mesodinium rubrum	0.00E+00	0.00E+00	7.79E+02	0.00E+00	1.09E+04

Cruise 88 05

Total Abundance (no./litre)

Taxon	50-1	50-2	50-3	50-4	50-5
dinobryon spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E+04
dictyocha speculum	1.56E+03	0.00E+00	0.00E+00	0.00E+00	1.17E+03
apedinella spinifera	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.84E+04
dicrateria sp.	1.97E+04	2.62E+04	1.28E+05	0.00E+00	2.46E+05
chrysochro spp. 0-5	1.97E+05	1.64E+05	1.26E+06	0.00E+00	1.44E+06
chrysochro spp. 6-10	0.00E+00	1.97E+04	8.84E+04	0.00E+00	2.65E+05
chrysochro spp. 10-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E+04
paralia sulcata	2.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
schroedere delicatula	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E+03
leptocylin danicus	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E+03
leptocylin minimus	0.00E+00	0.00E+00	1.71E+04	0.00E+00	4.32E+04
skeletonem costatum	3.12E+03	8.57E+03	1.87E+04	0.00E+00	2.92E+04
thalassios spp. < 10	1.79E+04	5.45E+03	7.01E+03	0.00E+00	7.01E+03
thalassios rotula	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+03
thalassios aestivalis	4.99E+04	4.67E+03	7.79E+02	0.00E+00	1.17E+03
thalassios nordenskiold	4.75E+04	3.12E+03	1.56E+03	0.00E+00	7.01E+03
chaetocero compressum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E+04
chaetocero convolutum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+03
chaetocero debile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+05
chaetocero decipiens	2.34E+03	0.00E+00	0.00E+00	0.00E+00	1.91E+05
chaetocero laciniosum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E+03
chaetocero radicans	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+03
rhizosolen fragilissima	7.79E+02	2.34E+03	8.57E+03	0.00E+00	5.84E+03
asterionel glacialis	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+03
thalassion nitzschoides	6.23E+03	3.12E+03	9.35E+03	0.00E+00	2.00E+02
navicula spp.	1.56E+03	0.00E+00	2.34E+03	0.00E+00	3.51E+03
nitzschia delicatissim	0.00E+00	7.79E+02	2.34E+03	0.00E+00	1.17E+04
nitzschia pacifica	0.00E+00	0.00E+00	7.79E+02	0.00E+00	9.35E+03
nitzschia closterium	3.90E+03	7.79E+02	1.56E+03	0.00E+00	1.05E+04
micromonas pusilla	7.67E+05	5.04E+05	1.21E+06	0.00E+00	4.76E+06
pyramimona spp. 3-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+05
tetraselmi spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E+04
eutreptiel spp.	0.00E+00	2.00E+02	0.00E+00	0.00E+00	1.17E+04
dinophycea spp. 5-15	2.34E+03	0.00E+00	0.00E+00	0.00E+00	9.35E+03
prorocentr minimum	1.56E+03	0.00E+00	0.00E+00	0.00E+00	9.35E+03

prorocentr minimum v.balticum	0.00E+00	0.00E+00	7.79E+02	0.00E+00	1.06E+05
dinophysis ovum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
gonyaulax digitale	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
gonyaulax triacantha	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
scripsiell sp.1 (small)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E+03
gymnodiniu spp. 10 15	6.23E+03	3.12E+03	0.00E+00	0.00E+00	1.64E+04
gymnodiniu spp. 15 20	0.00E+00	1.56E+03	3.12E+03	0.00E+00	1.17E+04
gymnodiniu spp. 20 50	4.00E+02	7.79E+02	3.12E+03	0.00E+00	8.18E+03
gymnodiniu spp. > 50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
gymnodiniu simplex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E+04
gyrodinium spp.	1.56E+03	6.23E+03	9.35E+03	0.00E+00	7.01E+03
katodinium rotundatum	0.00E+00	0.00E+00	1.56E+03	0.00E+00	2.34E+03
heterocaps triquetra	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E+03
micracanth spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E+03
ceratium fusus	2.34E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ceratium minutum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+02
cryptomona spp. 5-10	1.31E+04	6.55E+03	3.93E+04	0.00E+00	8.84E+04
cryptomona spp. 10.1-15	0.00E+00	0.00E+00	1.97E+04	0.00E+00	1.77E+05
cryptomona spp. 0-5	1.31E+04	2.62E+04	1.87E+05	0.00E+00	2.36E+05
cryptomona spp. 20-25	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E+04
cryptomona spp. 25 30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E+04
mesodinium rubrum	2.00E+02	7.79E+02	4.67E+03	0.00E+00	9.35E+03

Cruise 88-05

Total Abundance (no./litre)

Taxon	50 6	63-1	63-2	63-4	63-5
ochromonas spp.	0 00E+00	6.27E+03	0.00E+00	1.57E+04	0.00E+00
dinobryon spp.	5.90E+04	0.00E+00	0.00E+00	0.00E+00	1.31E+04
dictyocha speculum	2.34E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
apedinella spinifera	2.95E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dicrateria sp.	4.91E+04	1.25E+04	2.62E+04	5.50E+04	3.93E+04
chrysochro spp. 0-5	9.34E+05	7.53E+04	8.52E+04	1.34E+05	2.69E+05
chrysochro spp. 6-10	6.88E+04	1.25E+04	6.55E+03	1.84E+04	0.00E+00
chrysochro spp. 10-15	0.00E+00	0.00E+00	0.00E+00	3.93E+03	0.00E+00
paralia sulcata	0.00E+00	2.00E+03	7.00E+02	0.00E+00	0.00E+00
schroedere delicatula	1.56E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
leptocylin minimus	5.45E+03	7.79E+02	0.00E+00	0.00E+00	0.00E+00
skeletonem costatum	1.99E+06	5.65E+04	6.22E+04	1.95E+03	0.00E+00
thalassios spp. < 10	2.34E+03	7.01E+03	1.56E+03	1.95E+03	3.12E+03
thalassios aestivalis	3.12E+03	9.35E+03	3.90E+03	2.34E+03	1.56E+03
thalassios nordenskiold	9.35E+03	1.32E+04	1.21E+04	4.67E+03	1.56E+03
chaetocero compressum	2.49E+04	0.00E+00	0.00E+00	0.00E+00	1.56E+03
chaetocero debile	7.40E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chaetocero decipiens	6.93E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chaetocero laciniosum	3.12E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chaetocero pseudocrinit	4.67E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chaetocero radicans	2.03E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chaetocero socialis	3.90E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
rhizosolen fragilissima	3.12E+03	1.56E+03	0.00E+00	7.79E+02	6.23E+03
thalassion nitzschoides	1.56E+03	7.79E+02	7.79E+02	7.79E+02	7.01E+03
navicula spp.	1.56E+03	0.00E+00	0.00E+00	3.90E+02	7.79E+02
navicula wavrikae	0.00E+00	0.00E+00	1.00E+02	0.00E+00	0.00E+00
nitzschia delicatissim	7.79E+02	2.34E+03	0.00E+00	0.00E+00	1.56E+03
nitzschia pacifica	7.79E+02	0.00E+00	3.90E+02	0.00E+00	0.00E+00
nitzschia closterium	3.12E+03	4.67E+03	3.90E+02	1.17E+03	1.56E+03
micromonas pusilla	4.01E+06	5.77E+05	3.44E+05	3.46E+05	3.54E+05
pyramimona spp. 3 8	3.93E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetraselmi spp.	1.97E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
eutreptiel spp.	2.34E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dinophycea spp. 5-15	7.79E+03	0.00E+00	2.73E+03	3.90E+02	7.79E+02
prorocentr minimum	3.27E+04	3.90E+03	1.95E+03	1.95E+03	0.00E+00

prorocentr minimum v.balticum	1.56E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
prorocentr gracile	7.79E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dinophysis ovum	8.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
gonyaulax spinifera	4.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
alexandriu ostenfeldii	6.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
scripsiell sp.1 (small)	2.34E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
gymnodiniu spp. 10-15	3.90E+03	6.23E+03	7.79E+02	1.56E+03	5.45E+03
gymnodiniu spp. 15-20	5.45E+03	8.57E+03	3.90E+02	3.90E+02	0.00E+00
gymnodiniu spp. 20-50	2.88E+04	3.12E+03	1.17E+03	7.79E+02	0.00E+00
gymnodiniu simplex	7.79E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
gyrodinium spp.	9.35E+03	3.90E+03	3.51E+03	7.40E+03	1.17E+04
katodinium rotundatum	9.83E+03	0.00E+00	0.00E+00	3.90E+02	7.79E+02
heterocaps triquetra	6.39E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
micracanth spp.	1.17E+04	0.00E+00	3.90E+02	0.00E+00	0.00E+00
cryptomona spp. 5-10	1.67E+05	1.25E+04	6.55E+03	7.86E+03	0.00E+00
cryptomona spp. 10.1-15	8.84E+04	6.27E+03	3.28E+03	7.86E+03	0.00E+00
cryptomona spp. 15.1-20	9.83E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cryptomona spp. 0-5	4.82E+05	5.02E+04	2.29E+04	2.75E+04	3.28E+04
flagellate spp.	9.83E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
mesodinium rubrum	1.17E+04	7.79E+02	0.00E+00	7.79E+02	3.12E+03

Cruise 88-05

Total Abundance (no./litre)

Taxon	63-7	63-8	63-9	66-3	66-4
ochromonas spp.	9.83E+03	3.93E+04	4.91E+04	6.55E+03	1.97E+04
dinobryon spp.	0.00E+00	0.00E+00	1.97E+04	0.00E+00	9.83E+03
dictyocha speculum	0.00E+00	2.00E+02	1.56E+03	0.00E+00	0.00E+00
apedinella spinifera	0.00E+00	1.08E+05	3.93E+04	0.00E+00	0.00E+00
dicrateria sp.	1.67E+05	2.46E+05	3.24E+05	1.97E+04	9.83E+03
chrysochro spp. 0-5	5.26E+05	6.19E+05	8.55E+05	9.17E+04	8.19E+04
chrysochro spp. 6-10	2.46E+04	8.84E+04	2.16E+05	1.31E+04	1.97E+04
leptocylin danicus	0.00E+00	1.20E+03	3.12E+03	0.00E+00	0.00E+00
leptocylin minimus	2.34E+03	1.17E+04	0.00E+00	0.00E+00	0.00E+00
skeletonem costatum	0.00E+00	9.83E+04	1.32E+06	6.23E+03	4.32E+05
thalassios spp. < 10	2.34E+03	0.00E+00	0.00E+00	1.25E+04	1.32E+04
thalassios aestivalis	0.00E+00	0.00E+00	7.79E+02	4.67E+03	2.42E+04
thalassios nordenskiold	2.73E+03	2.34E+03	5.45E+03	1.87E+04	3.00E+04
coscinodis radiatus	0.00E+00	2.00E+02	0.00E+00	0.00E+00	0.00E+00
cerataulin pelagica	0.00E+00	7.79E+02	0.00E+00	0.00E+00	0.00E+00
chaetocero compressum	0.00E+00	1.64E+04	7.17E+04	0.00E+00	0.00E+00
chaetocero constrictum	0.00E+00	0.00E+00	1.09E+04	0.00E+00	0.00E+00
chaetocero debile	2.34E+03	5.06E+04	5.30E+04	0.00E+00	0.00E+00
chaetocero decipiens	0.00E+00	3.27E+04	6.47E+04	0.00E+00	0.00E+00
chaetocero laciniosum	0.00E+00	7.79E+02	6.23E+03	0.00E+00	0.00E+00
chaetocero pseudocrinit	0.00E+00	3.12E+03	3.12E+03	0.00E+00	0.00E+00
chaetocero radicans	0.00E+00	0.00E+00	9.35E+03	0.00E+00	0.00E+00
chaetocero socialis	0.00E+00	0.00E+00	3.90E+03	0.00E+00	0.00E+00
rhizosolen delicatula	0.00E+00	7.79E+02	9.35E+03	0.00E+00	0.00E+00
rhizosolen fragilissima	4.67E+03	7.79E+02	1.56E+03	0.00E+00	0.00E+00
asterionel glacialis	0.00E+00	3.90E+03	0.00E+00	0.00E+00	0.00E+00
thalassion nitzschoides	1.95E+03	0.00E+00	0.00E+00	0.00E+00	2.34E+03
navicula spp.	0.00E+00	7.79E+02	7.79E+02	0.00E+00	3.90E+02
nitzschia delicatissim	3.90E+02	3.12E+03	0.00E+00	0.00E+00	1.95E+03
nitzschia pacifica	0.00E+00	7.01E+03	4.67E+03	0.00E+00	0.00E+00
nitzschia closterium	1.17E+03	6.23E+03	4.67E+03	0.00E+00	7.79E+02
micromonas pusilla	6.14E+05	2.08E+06	4.32E+05	2.23E+05	3.28E+04
pyramimona spp. 3-8	0.00E+00	7.86E+04	5.90E+04	0.00E+00	0.00E+00
tetraselmi spp.	0.00E+00	0.00E+00	1.97E+04	0.00E+00	0.00E+00
eutreptiel spp.	3.90E+02	1.01E+04	2.34E+03	0.00E+00	0.00E+00

dinophycea spp. 5-15	1.56E+03	4.67E+03	3.90E+03	1.56E+03	1.17E+03
prorocentr minimum	1.56E+03	1.56E+04	1.95E+04	0.00E+00	0.00E+00
prorocentr minimum v.balticum	0.00E+00	8.18E+04	4.60E+04	0.00E+00	0.00E+00
prorocentr gracile	0.00E+00	0.00E+00	7.79E+02	0.00E+00	0.00E+00
dinophysis ovum	0.00E+00	0.00E+00	4.00E+02	0.00E+00	0.00E+00
dinophysis infundibulum	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
gonyaulax digitale	0.00E+00	0.00E+00	2.00E+02	0.00E+00	0.00E+00
gonyaulax triacantha	0.00E+00	0.00E+00	6.00E+02	0.00E+00	0.00E+00
alexandriu ostenfeldii	0.00E+00	0.00E+00	1.00E+03	0.00E+00	0.00E+00
scripsiell sp.1 (small)	0.00E+00	0.00E+00	1.56E+03	0.00E+00	0.00E+00
gymnodiniu spp. 10-15	3.90E+02	1.56E+03	8.57E+03	3.12E+03	8.57E+03
gymnodiniu spp. 15-20	1.95E+03	8.57E+03	7.79E+02	7.79E+02	7.79E+03
gymnodiniu spp. 20-50	1.56E+03	2.34E+03	1.56E+04	0.00E+00	1.95E+03
gymnodiniu spp. > 50	0.00E+00	7.79E+02	0.00E+00	0.00E+00	0.00E+00
gymnodiniu simplex	1.95E+03	3.93E+04	1.25E+04	0.00E+00	0.00E+00
gyrodinium spp.	1.60E+04	7.79E+03	9.35E+03	9.35E+03	1.17E+04
katodinium rotundatum	0.00E+00	1.97E+04	0.00E+00	1.56E+03	0.00E+00
heterocaps triquetra	0.00E+00	2.34E+03	3.66E+04	0.00E+00	0.00E+00
micracanth spp.	0.00E+00	2.34E+03	3.12E+03	0.00E+00	0.00E+00
ceratium minutum	0.00E+00	0.00E+00	6.00E+02	0.00E+00	0.00E+00
cryptomona spp. 5-10	3.44E+04	2.95E+04	1.08E+05	0.00E+00	1.31E+04
cryptomona spp. 10.1-15	9.83E+03	5.90E+04	3.93E+04	0.00E+00	0.00E+00
cryptomona spp. 15.1 20	4.91E+03	4.91E+04	9.83E+03	0.00E+00	0.00E+00
cryptomona spp. 0-5	9.34E+04	1.77E+05	2.56E+05	0.00E+00	0.00E+00
cryptomona spp. 20 25	0.00E+00	3.90E+03	0.00E+00	0.00E+00	0.00E+00
mesodinium rubrum	7.40E+03	1.95E+04	3.74E+04	0.00E+00	0.00E+00

Cruise 88-05

Total Abundance (no./litre)

Taxon	66-5	66-6	66-7	66-8	66-9
ochromonas spp.	0.00E+00	0.00E+00	6.55E+03	0.00E+00	0.00E+00
dinobryon spp.	1.88E+04	6.55E+03	6.55E+03	0.00E+00	3.54E+04
dictyocha speculum	0.00E+00	4.00E+02	0.00E+00	0.00E+00	1.87E+03
apedinella spinifera	0.00E+00	7.79E+02	0.00E+00	0.00E+00	4.72E+04
dicrateria sp.	5.65E+04	2.62E+04	3.93E+04	3.44E+05	4.60E+05
chrysochro spp. 0-5	4.27E+05	2.03E+05	4.00E+05	1.15E+06	1.43E+06
chrysochro spp. 6-10	5.65E+04	1.97E+04	5.24E+04	9.83E+04	2.00E+05
chrysochro spp. 10-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+04
melosira moniliformis	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E+03
stephanopy nipponica	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+02
leptocylin danicus	0.00E+00	0.00E+00	0.00E+00	1.00E+03	5.61E+03
leptocylin minimus	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E+03
skeletonem costatum	6.90E+04	1.90E+05	1.17E+04	3.12E+03	2.95E+05
thalassios spp. < 10	1.09E+04	7.01E+03	7.01E+03	1.09E+04	5.61E+03
thalassios rotula	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
thalassios aestivalis	7.79E+02	5.45E+03	2.34E+03	6.23E+03	0.00E+00
thalassios nordenskiold	1.17E+04	4.67E+03	2.34E+03	7.79E+02	9.35E+02
coscinodis radiatus	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
chaetocero compressum	0.00E+00	2.34E+03	5.45E+03	1.32E+04	2.24E+04
chaetocero constrictum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.61E+03
chaetocero convolutum	0.00E+00	0.00E+00	2.00E+02	2.00E+02	2.00E+02
chaetocero debile	0.00E+00	3.12E+03	3.90E+03	1.17E+04	6.83E+04
chaetocero decipiens	2.00E+02	1.56E+03	0.00E+00	2.96E+04	8.32E+04
chaetocero gracile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E+02
chaetocero laciniosum	0.00E+00	0.00E+00	0.00E+00	1.56E+03	1.03E+04
chaetocero pseudocrinit	0.00E+00	0.00E+00	0.00E+00	7.79E+02	1.40E+04
chaetocero radicans	0.00E+00	0.00E+00	1.56E+03	0.00E+00	1.87E+03
chaetocero septentriona	0.00E+00	0.00E+00	0.00E+00	1.56E+03	0.00E+00
rhizosolen fragilissima	5.45E+03	2.34E+03	7.79E+02	0.00E+00	9.35E+02
asterionel glacialis	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E+03
thalassiot frauenfeldii	2.00E+02	4.00E+02	0.00E+00	6.00E+02	0.00E+00
thalassion nitzschoides	1.01E+04	3.12E+03	1.56E+03	2.34E+03	4.00E+02
navicula spp.	0.00E+00	7.79E+02	7.79E+02	3.12E+03	0.00E+00
nitzschia spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E+02
nitzschia delicatissim	7.79E+02	2.34E+03	0.00E+00	3.12E+03	0.00E+00

nitzschia pacifica	0.00E+00	0.00E+00	0.00E+00	5.45E+03	3.74E+03
nitzschia closterium	1.56E+03	4.67E+03	3.12E+03	7.01E+03	5.61E+03
micromonas pusilla	5.71E+05	1.90E+05	3.80E+05	2.59E+06	1.82E+06
pyramimona spp. 3-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+04
tetraselmi spp.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E+04
eutreptiel spp.	0.00E+00	0.00E+00	2.00E+02	0.00E+00	1.59E+04
dinophycea spp. 5-15	0.00E+00	7.79E+02	1.56E+03	0.00E+00	6.54E+03
prorocentr minimum	0.00E+00	2.34E+03	7.79E+02	7.01E+03	1.68E+04
prorocentr minimum v.balticum	0.00E+00	3.12E+03	1.56E+03	2.57E+04	8.13E+04
prorocentr gracile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
dinophysis spp.	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
gonyaulax digitale	0.00E+00	2.00E+02	0.00E+00	0.00E+00	4.00E+02
gonyaulax triacantha	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+02
alexandriu ostenfeldii	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+02
scripsiell sp.1 (small)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E+02
gymnodiniu spp. 10-15	1.09E+04	7.79E+02	2.34E+03	4.67E+03	4.67E+03
gymnodiniu spp. 15-20	7.79E+02	7.79E+02	0.00E+00	7.01E+03	7.48E+03
gymnodiniu spp. 20-50	0.00E+00	2.00E+02	7.79E+02	0.00E+00	2.52E+04
gymnodiniu spp. > 50	2.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
gymnodiniu simplex	0.00E+00	1.56E+03	0.00E+00	7.79E+02	1.87E+03
gyrodinium spp.	1.40E+04	1.17E+04	7.79E+03	1.47E+04	1.22E+04
katodinium rotundatum	1.56E+03	6.55E+03	0.00E+00	1.56E+03	1.18E+04
torodinium robustum	0.00E+00	0.00E+00	0.00E+00	2.00E+02	0.00E+00
heterocaps triquetra	0.00E+00	1.56E+03	0.00E+00	0.00E+00	1.50E+04
micracanth spp.	0.00E+00	7.79E+02	0.00E+00	7.79E+02	1.03E+04
cryptomona spp. 5-10	1.25E+04	1.97E+04	1.97E+04	1.80E+05	1.30E+05
cryptomona spp. 10.1-15	6.27E+03	1.31E+04	1.31E+04	6.55E+04	9.43E+04
cryptomona spp. 15.1-20	0.00E+00	0.00E+00	7.79E+02	1.56E+03	0.00E+00
cryptomona spp. 0-5	4.39E+04	0.00E+00	5.90E+04	4.75E+05	3.07E+05
cryptomona spp. 20-25	0.00E+00	7.79E+02	0.00E+00	7.01E+03	1.18E+04
cryptomona spp. 25-30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+04
mesodinium rubrum	1.56E+03	4.67E+03	2.34E+03	3.58E+04	5.61E+04

Cruise 88 05

Total Abundance (no. litre)

Taxon	95 3	95 4	95 5	98 4
ochromonas spp.	2.31E+04	0.00E+00	0.00E+00	2.62E+04
dinobryon spp.	5.78E+03	3.93E+04	1.97E+04	6.55E+03
dictyocha speculum	0.00E+00	0.00E+00	0.00E+00	1.87E+03
apedinella spinifera	0.00E+00	6.55E+03	0.00E+00	1.97E+04
dicrateria sp.	5.78E+03	4.59E+04	4.91E+04	2.49E+05
chrysochro spp. 0-5	1.10E+05	4.06E+05	4.52E+05	6.29E+05
chrysochro spp. 6-10	1.73E+04	2.10E+05	0.00E+00	1.64E+05
schroedere delicatula	0.00E+00	7.79E+02	0.00E+00	0.00E+00
leptocylin danicus	3.12E+03	2.26E+04	0.00E+00	3.74E+03
leptocylin minimus	0.00E+00	3.43E+04	1.87E+04	0.00E+00
skeletonem costatum	9.90E+04	5.14E+04	1.39E+05	1.87E+03
thalassios spp. < 10	0.00E+00	7.79E+02	0.00E+00	5.61E+03
thalassios anguste line	0.00E+00	0.00E+00	0.00E+00	1.87E+03
thalassios aestivalis	1.56E+03	1.56E+03	0.00E+00	1.87E+03
thalassios nordenskiold	1.56E+03	0.00E+00	0.00E+00	1.87E+03
coscinodis spp.	0.00E+00	0.00E+00	0.00E+00	2.00E+02
chaetocero compressum	3.51E+04	4.77E+05	2.96E+05	1.08E+05
chaetocero constrictum	0.00E+00	1.87E+04	3.51E+03	1.40E+04
chaetocero convolutum	0.00E+00	2.00E+02	0.00E+00	2.00E+02
chaetocero debile	9.44E+05	4.18E+05	2.46E+05	1.26E+05
chaetocero decipiens	3.90E+04	1.17E+04	5.84E+03	5.61E+03
chaetocero laciniosum	0.00E+00	4.00E+02	1.87E+04	0.00E+00
chaetocero pseudocrinit	8.00E+02	3.51E+04	3.62E+04	3.55E+04
chaetocero radicans	4.67E+03	3.19E+04	1.01E+05	7.76E+04
chaetocero septentriona	7.79E+02	1.56E+03	0.00E+00	1.87E+03
chaetocero socialis	4.21E+04	2.57E+04	1.17E+03	4.67E+03
rhizosolen fragilissima	3.90E+03	1.56E+03	2.34E+03	6.54E+03
rhizosolen setigera	0.00E+00	2.00E+02	0.00E+00	0.00E+00
asterionel glacialis	0.00E+00	1.56E+03	3.51E+03	0.00E+00
thalassiot frauenfeldii	0.00E+00	1.20E+03	0.00E+00	0.00E+00
thalassion nitzschoides	0.00E+00	2.00E+02	0.00E+00	8.41E+03
navicula spp.	1.56E+03	0.00E+00	0.00E+00	1.87E+03
navicula wawrikae	2.00E+02	2.00E+02	0.00E+00	0.00E+00
nitzschia spp.	0.00E+00	1.56E+03	0.00E+00	0.00E+00
nitzschia delicatissim	3.12E+03	8.57E+03	1.17E+03	4.67E+03

nitzschia pacifica	4.00E+02	1.71E+04	2.20E+03	6.54E+03
nitzschia closterium	3.90E+03	5.45E+03	2.34E+03	4.67E+03
micromonas pusilla	1.85E+05	5.70E+05	1.13E+06	4.39E+05
pyramimona spp. 3 8	7.51E+04	5.24E+04	1.97E+04	8.52E+04
tetraselmi spp.	0.00E+00	0.00E+00	2.95E+04	4.59E+04
eutreptiel spp.	0.00E+00	4.67E+03	4.67E+03	0.00E+00
dinophycea spp. 5-15	1.56E+03	4.67E+03	2.34E+03	7.48E+03
prorocentr minimum	2.34E+03	2.34E+03	1.05E+04	1.31E+04
prorocentr minimum v.balticum	5.45E+03	3.12E+03	1.05E+04	1.40E+04
prorocentr gracile	0.00E+00	7.79E+02	1.17E+03	0.00E+00
gonyaulax digitale	0.00E+00	0.00E+00	2.00E+02	0.00E+00
gonyaulax triacantha	0.00E+00	0.00E+00	0.00E+00	4.00E+02
alexandriu ostenfeldii	0.00E+00	0.00E+00	2.00E+02	2.00E+02
scripsiell sp.1 (small)	0.00E+00	1.56E+03	1.17E+03	5.61E+03
gymnodiniu spp. 10-15	7.79E+02	3.90E+03	4.67E+03	2.80E+03
gymnodiniu spp. 15-20	0.00E+00	3.90E+03	0.00E+00	5.61E+03
gymnodiniu spp. 20-50	7.79E+02	6.23E+03	1.05E+04	2.80E+03
gymnodiniu spp. › 50	2.00E+02	0.00E+00	0.00E+00	2.00E+02
gymnodiniu simplex	0.00E+00	9.35E+03	1.97E+04	2.90E+04
gyrodinium spp.	3.90E+03	1.17E+04	7.01E+03	1.12E+04
katodinium rotundatum	0.00E+00	7.79E+02	0.00E+00	1.97E+04
heterocaps triquetra	3.12E+03	1.09E+04	3.62E+04	2.06E+04
micracanth spp.	0.00E+00	7.79E+03	3.51E+03	2.80E+03
protogonya catanella	0.00E+00	2.00E+02	4.00E+02	0.00E+00
ceratium minutum	2.00E+02	2.00E+02	0.00E+00	2.00E+02
cryptomona spp. 5-10	2.89E+04	4.59E+04	7.86E+04	9.83E+04
cryptomona spp. 10.1-15	2.89E+04	3.28E+04	2.95E+04	6.55E+04
cryptomona spp. 15.1-20	0.00E+00	0.00E+00	9.83E+03	1.31E+04
cryptomona spp. 0-5	4.62E+04	9.17E+04	1.38E+05	2.03E+05
cryptomona spp. 20-25	5.78E+03	6.55E+03	0.00E+00	0.00E+00
mesodinium rubrum	2.65E+04	2.03E+04	2.92E+04	4.11E+04

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Total Abundance (no./litre)

Taxon	100-5	100 7	100 9	103-7
ochromonas spp.	0.00E+00	2.62E+04	0.00E+00	0.00E+00
dinobryon spp.	0.00E+00	1.31E+04	2.46E+03	2.11E+04
dictyocha speculum	0.00E+00	2.34E+03	0.00E+00	0.00E+00
apedinella spinifera	7.79E+02	2.62E+04	0.00E+00	7.02E+03
dicrateria sp.	6.55E+03	1.51E+05	2.46E+03	7.02E+03
chrysochro spp. 0-5	2.29E+05	7.73E+05	7.37E+03	1.68E+05
chrysochro spp. 6-10	1.64E+04	2.42E+05	0.00E+00	8.32E+04
chrysochro spp. 10-15	0.00E+00	2.62E+04	0.00E+00	0.00E+00
stephanopy nipponica	0.00E+00	2.00E+02	0.00E+00	0.00E+00
leptocylin danicus	6.00E+02	4.67E+03	0.00E+00	5.61E+03
leptocylin minimus	8.00E+02	1.19E+05	0.00E+00	7.48E+03
skeletonem costatum	6.23E+03	1.83E+05	0.00E+00	1.31E+05
thalassios spp. < 10	1.64E+04	1.52E+04	0.00E+00	9.35E+02
thalassios aestivalis	0.00E+00	2.34E+04	0.00E+00	9.35E+02
thalassios nordenskiold	3.12E+03	9.35E+03	0.00E+00	0.00E+00
eucampia zoodiacus	7.79E+02	3.51E+03	0.00E+00	6.00E+02
chaetocero spp. cells	0.00E+00	0.00E+00	0.00E+00	9.35E+03
chaetocero compressum	0.00E+00	2.92E+04	0.00E+00	7.95E+04
chaetocero convolutum	0.00E+00	0.00E+00	0.00E+00	4.67E+03
chaetocero debile	0.00E+00	1.99E+04	0.00E+00	6.53E+05
chaetocero decipiens	0.00E+00	0.00E+00	0.00E+00	3.93E+04
chaetocero laciniosum	0.00E+00	6.00E+02	0.00E+00	9.35E+02
chaetocero pseudocrinit	0.00E+00	1.17E+03	0.00E+00	2.90E+04
chaetocero radicans	0.00E+00	4.00E+02	0.00E+00	8.51E+04
chaetocero septentriona	0.00E+00	1.17E+03	0.00E+00	3.74E+03
chaetocero socialis	0.00E+00	8.18E+03	0.00E+00	9.54E+04
rhizosolen fragilissima	3.04E+04	8.65E+04	0.00E+00	5.61E+03
asterionel glacialis	2.00E+02	3.51E+03	0.00E+00	2.80E+03
thalassiot frauenfeldii	2.00E+02	0.00E+00	0.00E+00	0.00E+00
thalassion nitzschoides	1.09E+04	2.80E+04	0.00E+00	2.80E+03
gyrosigma spp. pleurosigma	0.00E+00	0.00E+00	0.00E+00	2.00E+02
navicula spp.	2.34E+03	3.16E+04	0.00E+00	1.87E+03
nitzschia spp.	0.00E+00	0.00E+00	3.90E+02	1.87E+03
nitzschia delicatissim	7.79E+02	3.16E+04	0.00E+00	5.61E+03
nitzschia pacifica	2.34E+03	3.39E+04	0.00E+00	1.78E+04

nitzschia closterium	3.90E+03	2.22E+04	0.00E+00	1.31E+03
micromonas pusilla	1.11E+05	3.08E+05	8.84E+04	4.07E+05
pyramimona spp. 3 8	0.00E+00	6.55E+04	0.00E+00	2.81E+04
eutreptiel spp.	0.00E+00	1.17E+03	0.00E+00	0.00E+00
dinophycea spp. 5 15	0.00E+00	3.51E+03	0.00E+00	3.74E+03
prorocentr minimum	0.00E+00	7.01E+03	0.00E+00	3.74E+03
prorocentr minimum v.balticum	1.56E+03	2.10E+04	0.00E+00	1.87E+03
gonyaulax triacantha	0.00E+00	0.00E+00	0.00E+00	2.00E+02
gymnodiniu spp. 10 15	1.56E+03	7.01E+03	0.00E+00	1.87E+03
gymnodiniu spp. 15 20	7.79E+02	2.34E+03	0.00E+00	2.80E+03
gymnodiniu spp. 20 50	2.00E+02	0.00E+00	0.00E+00	9.35E+02
gymnodiniu simplex	0.00E+00	5.90E+04	0.00E+00	9.35E+02
gyrodinium spp.	5.45E+03	5.84E+03	0.00E+00	4.67E+03
katodinium rotundatum	7.79E+02	3.28E+04	0.00E+00	0.00E+00
ceratium minutum	0.00E+00	0.00E+00	0.00E+00	2.00E+02
cryptomona spp. 5-10	1.64E+04	1.77E+05	0.00E+00	2.11E+04
cryptomona spp. 10.1 15	3.28E+04	1.05E+05	0.00E+00	5.61E+04
cryptomona spp. 0 5	2.95E+04	2.23E+05	2.46E+03	2.81E+04
mesodinium rubrum	0.00E+00	1.64E+04	0.00E+00	2.90E+04

DATA SECTION 7

ZOOPLANKTON IDENTITY AND ABUNDANCE

Table 7 Zooplankton taxonomic list

Table 8 WV87 Zooplankton identity and abundance (Bongo vertical net hauls)

Table 9 OE8805 Zooplankton identity and abundance (Bongo vertical net hauls)

Table 10 OE8805 Zooplankton identity and abundance (Bioness oblique net hauls)

TABLE 7: ZOOPLANKTON SPECIES LIST: CRUISES WV87 AND OE8805

- **Cnidaria**
  - Medusae
- **Hydrozoa**
  - **Hydroida**
    - Euphysa
    - Sarsia
    - Phialidium
    - Eutonia
    - Probiscodactyla
  - **Trachylida**
    - Aglantha
    - Aegina
- **Siphonophora**
  - Muggiaea
  - Nanomia
- **Ctenophora**
  - **Tentaculata**
    - Pleurobrachia
- **Nemertea**
  - Nemertinea larvae
- **Nematoda**
- **Mollusca**
  - **Gastropoda**
    - Gastropod veligers
  - **Pteropoda**
    - Limacina
- **Bivalvia**
  - Bivalve veligers
- **Annelida**
  - **Polychaeta**
    - Polychaete trochophores
    - Polychaete larvae
    - Polychaete
    - Spionid larvae
    - Syllid
    - Tomopteris septentrionalis
- **Bryozoa**
  - Cyphonautes larvae
- **Arthropoda**
  - **Crustacea**
    - **Cladocera**
      - Evadne
      - Podon
    - **Ostracoda**
      - Conchoecia
    - **Copepoda**
      - Copepod nauplii
      - **Calanoida**
        - Calanoida (unidentified)
        - Acartia
        - Acartia clausi
        - Acartia longiremis
        - Acartia tonsa
        - Calanus
        - Calanus marshallae
        - Calanus pacificus
        - Calocalanus styliremis
        - Candacja columbiae
        - Centropages abdominalis
        - Chiridius gracilis
        - Clausocalanus parapergens
        - Clausocalanus pergens
        - Ctenocalanus vanus
        - Epilabidocera longipedata
        - Eucalanus bungii
        - Eucalanus californicus
        - Euchaeta
        - Euchaeta elongata
        - Gaetanus intermedius
        - Mesocalanus tenuicornis
        - Metridia
        - Metridia pacifica
        - Microcalanus pygmaeus pusillus
        - Neocalanus cristatus
        - Neocalanus plumchrus
        - Paracalanus parvus
        - Pleuromamma xiphias
        - Pseudocalanus minutus/elongata
        - Racovitzanus antarcticus
        - Scolecithricella minor
        - Tortanus discaudatus

- **Cyclopoida**
  - Corycaeus anglicus
  - Oithona atlantica
  - Oithona similis
  - Oncaea conifera
- **Harpacticoida**
  - Harpacticoida (unidentified)
- **Cirripedia**
  - Barnacle nauplii
  - Barnacle cypride
- **Euphausiacea**
  - Euphausiid nauplii
  - Euphausiid juveniles
  - Euphausiid calyptopsis
  - Euphausiid furcilia
  - Euphausia pacifica
  - Thysanoessa longipes
  - Thysanoessa raschii
  - Thysanoessa spinifera
- **Decapoda**
  - **Caridea**
    - Caridean zoea
    - Caridean mysis
    - Crangonidae
    - Eualid
    - Pandalidae
    - Pandalus jordani
    - Pasiphaea pacifica
  - **Anomura**
    - Munida zoea
    - Pagurid zoea
    - Pagurid megalops
    - Porcellanid zoea
  - **Brachyura**
    - Brachyuran zoea
    - Brachyuran megalops
- **Mysida**
  - Holmsiella anomola
- **Cumacea**
- **Isopoda**
- **Amphipoda**
  - **Gammaridea**
    - Cyphocaris
    - Cyphocaris challengeri
  - **Hyperiidea**
    - Hyperiidae
    - Hyperia
    - Hyperoche medusarum
    - Parathemisto pacifica
    - Primno
    - Primno abyssalis
- **Echinodermata** — Echinoderm pluteus
- **Chaetognatha** — Chaetognatha
  - Chaetognath juvenile
  - Sagitta decipiens
  - Sagitta elegans
  - Sagitta scrippsae
  - Eukrohnia hamata
- **Urochordata**
  - **Larvacea** — Oikopleura
    - Fritillaria
- **Vertebrata**
  - **Pisces** — Fish larvae
    - **Pleuronectidae**
- **Miscellaneous**
  - Unclassified eggs

TABLE 8: ZOOPLANKTON ABUNDANCE: WV87

Bongo vertical net haul: animals.m–2

Taxon:	Stn 6	Stn 7	Stn 8	Stn 9
Acartia longiremis ♀	6			
Acartia longiremis ♂f		8		
Acartia tonsa ♂m	6			
Barnacle cyprids	6	123	31	5
Barnacle nauplii	6	54		14
Bivalve veligers		92	19	14
Brachyuran megalops s2	•			
Brachyuran zoea s1	13	46	13	
Calanoida 1–3 (unidentified)	205	54	31	33
Calanus 1–3		8	19	43
Calanus marshallae 4		23	6	10
Calanus marshallae ♀	6		19	5
Calanus marshallae ♂f	13	15	19	5
Calanus marshallae ♂m	13		13	29
Calocalanus styliremis ♂f			13	
Caridean mysis s1		8	6	
Caridean mysis s2	•	•		•
Caridean zoea s2	•			
Chaetognath juvenile s1	6	15		
Chaetognath juvenile s2	6	2	7	4
Clausocalanus parapergens ♂f			6	
Clausocalanus pergens ♂f	6			
Conchoecia s1			6	
Copepod nauplii	6	15		14
Corycaeus anglicus ♂f		8	6	
Crangonidae s2		•		•
Ctenocalanus vanus ♀	13			10
Ctenocalanus vanus ♂f	26		6	19

WV67 (cont.)	Stn 6	Stn 7	Stn 8	Stn 9
Ctenocalanus vanus 6m	6			10
Cyphonautes larvae	6			
Echinoderm pluteus e1	6			
Eualid e3		•		
Eucalanus bungii 6f	•			•
Euchaeta 4			6	
Eukrohnia hamata e3	•			
Euphausia pacifica e1	6			
Euphausiid calyptopis e1		8	6	10
Euphausiid furcilia e1		16	13	10
Euphausiid nauplii			6	5
Euphysa		8		
Eutonia		•	•	•
Evadne e1		69		
Fish larvae e2		•		
Fish larvae e3				•
Gastropod veligere e1		23	6	10
Limacina e1	13	16		43
Medusae e1	13		6	
Metridia 1–4		23		
Metridia pacifica 6f		8		
Metridia pacifica 6m	6			
Microcalanus pygmaeus pusillus 5			6	
Mugglaea e2		•	•	
Nanomia e1				5
Nemertinea larvae e1		8	6	
Oikopleura e1		169	50	10
Oikopleura e2	•	•		
Oithona similis 1–5	301	100	270	234
Oithona similis 6f	256	108	213	287
Oithona similis 6m	32	15	25	14
Pagurid zoea e2	•	•	•	8

WV87 (cont.)	Stn 6	Stn 7	Stn 8	Stn 9
Pandalidae c2			•	
Pandalidae c3	•			•
Paracalanus parvus 6f			6	
Parathemisto pacifica f		•	•	
Parathemisto pacifica m		•		
Phialidium c2	1	•	•	•
Phialidium c3	•	1	1	•
Pleurobrachia c1		8		
Pleurobrachia c2	•	•	1	•
Pleurobrachia c3	•			
Podon c1		15		
Polychaete larvae c1		8		
Polychaete trochophores c1	6	8		
Probiscodactyla c2			•	
Pseudocalanus min/el 5f	32	23	6	33
Pseudocalanus min/el 5m	38	54	6	29
Pseudocalanus min/el 6f	198	531	527	72
Pseudocalanus min/el 6m	38	46	19	24
Sagitta decipiens c2	•		4	5
Sagitta decipiens c3		2	5	3
Sagitta elegans c3	7		4	3
Sagitta scrippsae c2		•		
Sagitta scrippsae c3		•		
Scolecithricella minor 6m				5
Spionid larvae c1	6	23	69	5
Unclassified eggs	307			14

TABLE 9: ZOOPLANKTON ABUNDANCE: OE8805

Bongo vertical net haul: animals.m-2

Taxon:	Stn 15A	Stn 28	Stn 31A	Stn 34
Acartia 1-4	130	173	212	394
Acartia clausii 5				16
Acartia clausii 6f	6		12	8
Acartia clausii 6m	30			16
Acartia longiremis 5	53	111	25	58
Acartia longiremis 6f	65	148	100	148
Acartia longiremis 6m	83	49	75	222
Acartia tonsa 6m				8
Barnacle nauplii	30		106	394
Bivalve veligers	71	99	100	99
Brachyuran megalope c2	*			
Brachyuran zoea c1			50	131
Calanoida 1-3 (unidentified)	65	457	62	58
Calanus 1-3	42	124	19	
Calanus marshallae 4		25		
Calanus marshallae 5	6	12	19	
Calanus marshallae 6f		111	12	
Calanus pacificus 5			6	
Caridean mysis c2	*	*	*	*
Caridean mysis c3	*		*	
Caridean zoea c1			6	33
Caridean zoea c2	*			
Centropages abdominalis 5	12			
Centropages abdominalis 6f			6	8
Centropages abdominalis 6m			6	16
Chaetognath juvenile c1				16
Chaetognath juvenile c2	1	*	1	*
Chaetognatha c3	*	433	*	

OE8805 Bongo (cont.)	Stn 15A	Stn 28	Stn 31A	Stn 34
Copepod naupili	457		224	115
Corycaeus anglicus 6f			6	
Crangonidae e1			12	
Crangonidae e2	•			•
Echinoderm pluteus e1	12	37		33
Eualid e2			•	
Eucalanus bungii 6f		•		
Eucalanus californicus 6f		•		
Eukrohnia hamata e3	•	•		
Euphausia pacifica e2		•		
Euphausiid calyptopis e1	30		6	6
Euphausiid juveniles e1	6			
Euphausiid juveniles e2	•		•	
Euphausiid naupili	231	37	44	90
Evadne e1				6
Fish larvae e2		•		•
Fish larvae e3	•	•		
Fritillaria e1	18			
Gastropod veligers e1	6		56	6
Harpacticoida				6
Hyperiidae e1				6
Isopoda e1				16
Limacina e1	12	111	6	33
Mesocalanus tenuicornis 6f		12		
Metridia pacifica 5m	30			
Metridia pacifica 6f	6	12		
Metridia pacifica 6m	24			
Mugilasa e2	•		•	•
Munida zoea e2	•			
Oikopleura e1	77	161	50	99
Oikopleura e2		•	•	
Oithona similis 1-5		62		58

OE8805 Bongo (cont.)	Stn 15A	Stn 28	Stn 31A	Stn 34
Oithona similis 6f		569	305	304
Oithona similis 6m		12		
Pagurid megalops s2			•	
Pagurid zoea s1	6		•	8
Pagurid zoea s2	•	•		
Pandalidae s2	•	•	•	
Paracalanus parvus 5	18			8
Paracalanus parvus 6f	12		25	16
Paracalanus parvus 6m			19	
Phialidium s2		•	•	•
Phialidium s3		•	3	3
Pleurobrachia s2	•	2	•	•
Polychaete trochophores s1			19	8
Porcellanidae zoea s1				58
Pseudocalanus min/el 1–4			19	
Pseudocalanus min/el 5f	83	198	118	156
Pseudocalanus min/el 5m	95	161	193	140
Pseudocalanus min/el 6f	427	1273	349	263
Pseudocalanus min/el 6m	101	470	69	58
Sagitta decipiens s3	•	1		
Sagitta elegans s3	3	1	•	
Spionid larvae s1				8
Syllid s2		•		
Thysanoessa spinifera f		•	•	
Thysanoessa spinifera m	•	•	•	
Thysanoessa spinifera s1	6			
Thysanoessa spinifera s2		•		
Tortanus discaudatus 6m			6	
Unclassified eggs	12	507	206	58

TABLE 10: ZOOPLANKTON ABUNDANCE: OE8805

Bioness oblique net haul: animals.m-3

* Taxa present in concentrations of less than 1.m-3

	Stn 52-1	Stn 52-2	Stn 52-3	Stn 52-5	Stn 52-6	Stn 52-7	Stn 54-1	Stn 54-3	Stn 54-4	Stn 54-5	Stn 54-6	Stn 54-7
Depth of haul:	92-86	86-75	75-52	52-25	25-10	10-0	90-86	86-74	74-50	50-24	24-20	10-0
Taxon:												
Acartia 1-4					328	360					16	2032
Acartia clausi 6f												
Acartia longiremis 5					591	254					67	449
Acartia longiremis 6f	7	5		14	1182	381	2			7	30	567
Acartia longiremis 6m		5		14	394	592	2				45	254
Aegina s2												
Aglantha s2	*											*
Aglantha s3												
Barnacle cypride			12									
Barnacle nauplii	*					22	2					264
Bivalve veligers					131					3		235
Brachyuran megalope s1				*								
Brachyuran megalope s2		*	*		*							
Brachyuran megalope s3												
Brachyuran zoea s1		11		14		21						
Brachyuran zoea s2												
Calanoida 1-3 (unidentified)	7		12	149	3610	1185	2			24	397	1622
Calanus 1-3				14	459	85					15	20
Calanus marshallae 4		16		41				3	26	3	15	
Calanus marshallae 5	22	91	61				19	42	71			20
Calanus marshallae 6f	30	123	24				33	105	110			
Calanus marshallae 6m	7	11					7	6	45			
Calanus pacificus 5												
Calanus pacificus 6f							5					
Candacia columbiae 6f												
Candacia columbiae 6m												
Caridean mysis s1												

OE8805 (cont.)	Stn 52–1	Stn 52–2	Stn 52–3	Stn 52–5	Stn 52–6	Stn 52–7	Stn 54–1	Stn 54–3	Stn 54–4	Stn 54–5	Stn 54–6	Stn 54–7
Depth of haul:	92–86	86–75	75–52	52–25	25–10	10–0	90–86	86–74	74–50	50–24	24–20	10–0
Caridean myels s2	1	•	•	•	•	•	3	•	•	•	•	•
Caridean myels s3	•	•					•	•				
Caridean zoea s1												20
Centropages abdominalis 1–4												
Centropages abdominalis 5						42						20
Centropages abdominalis 6f					66	65						
Centropages abdominalis 6m					131	106					7	
Chaetognath juvenile s1									7		7	
Chaetognath juvenile s2			3	•	•	•			2	•	•	•
Chaetognath juvenile s3												
Chaetognatha s2							7					
Chaetognatha s3	3	3	•		•	•		3				
Chiridius gracilis 5												
Chiridius gracilis 6f												
Conchoecia s1												
Copepod nauplii			12	41	853	254		3	7	17	62	178
Corycaeus anglicus 5			12							7		
Corycaeus anglicus 6f												
Corycaeus anglicus 6m												
Crangonidae s2												
Crangonidae s3												
Ctenocalanus vanus 5				14								
Ctenocalanus vanus 6f				14								
Cumacea s3												
Cyphocaris s1												
Cyphocaris challengeri s2	1	•					2	•	•			
Cyphocaris challengeri s3												
Cyphonautes larvae												39
Echinoderm pluteus s1						106						
Epilabidocera longipedata 1–4												
Epilabidocera longipedata 5												

OE8805 (cont.)	Stn 52–1	Stn 52–2	Stn 52–3	Stn 52–5	Stn 52–6	Stn 52–7	Stn 54–1	Stn 54–3	Stn 54–4	Stn 54–5	Stn 54–6	Stn 54–7
Depth of haul:	92–86	86–75	75–52	52–25	25–10	10–0	90–86	86–74	74–50	50–24	24–20	10–0
Epilabidocera longipedata 6m										3		
Eucalanus bungii 6f	*	•	•									
Eucalanus bungii 6m												
Eucalanus bungii 6f	•		•					•		•		
Eucalanus californicus 6f												
Euchaeta 3												
Euchaeta 4												
Euchaeta elongata 4												
Euchaeta elongata 5f												
Euchaeta elongata 5m												
Euchaeta elongata 6f												
Euchaeta elongata 6m												
Eutrohnia hamata c2			•				•	•				
Eutrohnia hamata c3	•	2	•				•	•				
Euphausia pacifica f			•									
Euphausia pacifica m	•			•			•					
Euphausia pacifica c1												
Euphausia pacifica c2	•	5	•				9	9	•			
Euphausia pacifica c3												
Euphausiacea			•									
Euphausiid calyptopis c1					66	85						117
Euphausiid furcilia c1												
Euphausiid juveniles c2	•	•		•								
Euphausiid nauplii	7	5	37	648	1575	169			39	135	337	176
Euphysa					•							
Eutonia												•
Evadne c1						21						
Fish larvae c1					•							
Fish larvae c2			•			•				•		•
Fish larvae c3	•	•		•		•	•				•	•
Fritillaria c1												

OE8805 (cont.)	Stn 52–1	Stn 52–2	Stn 52–3	Stn 52–5	Stn 52–6	Stn 52–7	Stn 54–1	Stn 54–3	Stn 54–4	Stn 54–5	Stn 54–6	Stn 54–7
Depth of haul:	92–86	86–75	75–52	52–25	25–10	10–0	90–86	86–74	74–50	50–24	24–20	10–0
Gaetanus intermedius 6f												
Gastropod veligere e1									7			
Holmselia anomola e3												
Hyperia e1												
Hyperiidae e1										3	7	
Hyperoche medusarum e2												
Hyperoche medusarum e3												
Isopoda e1												
Limacina e1												
Medusae e1												
Medusae e2												
Mesocalanus tenuicornis 5												
Metridia 1–4			49				9		32			
Metridia pacifica 1–4	7	16					2	9	7			
Metridia pacifica 6f	45	11	12				16	24	26			
Metridia pacifica 6m	186	107	24				116	45	7			
Metridia pacifica 6f	141	16					61	24				
Metridia pacifica 6m	467	219					231	39				
Microcalanus pygmaeus pusillus	67	80	37	27			87	117	39			
Microcalanus pygmaeus pusillus	30	37	49				59	105	62			
Microcalanus pygmaeus pusillus	30	27	12				16	15	7			
Mugilasa e2												
Nematoda e2												
Nematoda e3												
Neocalanus cristatus 5												
Neocalanus plumchrus 5												
Oikopleura e1						42						
Oikopleura e2												
Oithona atlantica 1–5												
Oithona atlantica 6f		5		14			2	12			75	
Oithona similis 1–5	22	21	12	41	197	148	99					78

OE8805 (cont.)	Stn 52–1	Stn 52–2	Stn 52–3	Stn 52–5	Stn 52–6	Stn 52–7	Stn 54–1	Stn 54–3	Stn 54–4	Stn 54–5	Stn 54–6	Stn 54–7
Depth of haul:	92–86	86–75	75–52	52–25	25–10	10–0	90–86	86–74	74–50	50–24	24–20	10–0
Oithona similis 6f	200	85	85	311	853			99	104			
Oithona similis 6m								6				
Oncaea conifera 6f										84		
Pagurid megalops s2	•		•									
Pagurid zoea s2	•	•	•	•	•	•	2	•	•	•	•	•
Pagurid zoea s3												
Pandalidae s1												•
Pandalidae s2				•		•	•					
Pandalidae s3	•						•					
Pandalus jordani												
Paracalanus parvus 5												
Paracalanus parvus 6f		5		14	66	42				3		20
Paracalanus parvus 6m		5										
Parathemisto pacifica f	•		•	•		•					•	
Parathemisto pacifica m			•		•							
Parathemisto pacifica s1												
Pasiphaea pacifica s3												
Phialidium s2		•										•
Phialidium s3				•	•					•		•
Pleurobrachia s2					•	•					•	•
Pleurobrachia s3												
Pleuromamma xiphias 6f												
Pleuronectidae							•					
Podon s1												
Polychaete s2										•		
Polychaete larvae s1												
Polychaete trochophores s1												
Porcellanidae zoea s1												
Primno s1												
Primno abyssalis f												
Primno abyssalis m												

OE8805 (cont.)	Stn 52–1	Stn 52–2	Stn 52–3	Stn 52–5	Stn 52–6	Stn 52–7	Stn 54–1	Stn 54–3	Stn 54–4	Stn 54–5	Stn 54–6	Stn 54–7
Depth of haul:	92–86	86–75	75–52	52–25	25–10	10–0	90–86	86–74	74–50	50–24	24–20	10–0
Primno abyssalis s1												
Primno abyssalis s2												
Probiscodactyla s2				•					•			
Pseudocalanus min/el 1–4				14	197						37	
Pseudocalanus min/el 6f	18	11	219	324	1510	402	12	9	84	44	142	332
Pseudocalanus min/el 6m	37	37	219	230	1838	360	21	12	52	27	135	645
Pseudocalanus min/el 6f	89	352	1609	608	3348	762	75	245	819	189	778	782
Pseudocalanus min/el 6m	59	53	731	1283	3479	169	31	42	214	387	606	156
Racovitzanus antarcticus 6f												
Sagitta elegans s2							78					
Sagitta elegans s3	36	55	3	•	•			86	12	•	•	
Sarsia s2												•
Sarsia s3												
Scolecithricella minor 5	7											
Scolecithricella minor 6f	7	5										
Scolecithricella minor 6m												
Thysanoessa longipes f												
Thysanoessa longipes m							•	•				
Thysanoessa raschii f												
Thysanoessa raschii m												
Thysanoessa spinifera f			•	•				•				
Thysanoessa spinifera m		•										
Thysanoessa spinifera s2	•	2	2		•			1	3	•	•	
Tomopteris septentrionalis s3												
Unclassified eggs	15	11	24	176	459	2623	7			44	172	4983

TABLE 10 (cont.)

Bioness oblique net haul: animals.m-3

* Taxa present in concentrations of less than 1.m-3

Depth of haul:	Stn 57-1 91-75	Stn 57-2 75-49	Stn 57-3 49-30	Stn 57-4 30-8	Stn 57-5 8-0	Stn 59-1 85-76	Stn 59-2 76-51	Stn 59-3 51-31	Stn 59-4 31-9	Stn 59-5 9-0
Taxon:										
Acartia 1-4				487	1465	19				3768
Acartia clausi 6f	5				16			11		48
Acartia longiremis 5	5			393	386	6		11	721	290
Acartia longiremis 6f	10		39	377	676	6	4	68	697	580
Acartia longiremis 6m	10			173	225	12		23	288	290
Aegina s2								*		
Aglantha s2										
Aglantha s3										
Barnacle cyprids	5			16	773		4	6		48
Barnacle naupii										1159
Bivalve veligers			39	16	32		7			
Brachyuran megalops s1										
Brachyuran megalops s2										
Brachyuran megalops s3										
Brachyuran zoea s1	5				16	25	7		24	48
Brachyuran zoea s2					*					
Calanoida 1-3 (unidentified)	35	24	156	1147	451	12	44	102	1394	1546
Calanus 1-3		16	39	63	177	6	4	164	264	97
Calanus marshallae 4		16		16	16	6	11	23	24	97
Calanus marshallae 5	25	32			16	12	15	11	72	48
Calanus marshallae 6f	25	16	49		32	12	15	39	48	48
Calanus marshallae 6m		8				31	4			
Calanus pacificus 5										
Calanus pacificus 6f										
Candacia columbiae 6f										
Candacia columbiae 6m										
Caridean mysis s1										48

OE8805 (cont.)	Stn 57–1	Stn 57–2	Stn 57–3	Stn 57–4	Stn 57–5	Stn 59–1	Stn 59–2	Stn 59–3	Stn 59–4	Stn 59–5
Depth of haul:	91–75	75–49	49–30	30–8	8–0	85–76	76–51	51–31	31–9	9–0
Caridean mysis s2	•	•	•	•	5	•	•	•	•	2
Caridean mysis s3	•				•		•	•	•	•
Caridean zoea s1										
Centropages abdominalis 1–4										
Centropages abdominalis 5				31	32				48	48
Centropages abdominalis 6f					16					48
Centropages abdominalis 6m				16						48
Chaetognath juvenile s1										
Chaetognath juvenile s2			•	2	6		•	•	2	5
Chaetognath juvenile s3		•								
Chaetognatha s2										
Chaetognatha s3	2	•	•	•	•	•	1			
Chiridius gracilis 5										
Chiridius gracilis 6f										
Conchoecia s1										
Copepod nauplii		87	69		531	31	51	175	24	1691
Corycaeus anglicus 5										
Corycaeus anglicus 6f										
Corycaeus anglicus 6m										
Crangonidae s2	•			•						
Crangonidae s3					•					
Ctenocalanus vanus 5										
Ctenocalanus vanus 6f										
Cumacea s3	•									
Cyphocaris s1										
Cyphocaris challengeri s2	•	•	•	•		•	1	•	•	
Cyphocaris challengeri s3			•			•	•	•		
Cyphonautes larvae										
Echinoderm pluteus s1				16	225					97
Epilabidocera longipedata 1–4									24	
Epilabidocera longipedata 5										

OE8805 (cont.)	Stn 57–1	Stn 57–2	Stn 57–3	Stn 57–4	Stn 57–5	Stn 59–1	Stn 59–2	Stn 59–3	Stn 59–4	Stn 59–5
Depth of haul:	91–75	75–49	49–30	30–8	8–0	85–76	76–51	51–31	31–9	9–0
Epilabidocera longipedata 6m										
Eucalanus bungii 5f										
Eucalanus bungii 5m										
Eucalanus bungii 6f	•									•
Eucalanus californicus 6f										
Euchaeta 3										
Euchaeta 4										
Euchaeta elongata 4										
Euchaeta elongata 5f										
Euchaeta elongata 5m										
Euchaeta elongata 6f										
Euchaeta elongata 6m										
Eukrohn'a hamata s2						•				
Eukrohnia hamata s3	1	•				1	•	•		
Euphausia pacifica f				•				•	•	
Euphausia pacifica m		•		•			•	•	•	
Euphausia pacifica s1								2		
Euphausia pacifica s2	•	1	•	16	3	5	6		2	2
Euphausia pacifica s3										
Euphausiacea										
Euphausiid calyptopis s1		8			16					242
Euphausiid furcilia s1		8								48
Euphausiid juveniles s2	•			•						
Euphausiid nauplii	10	134	374	79	64	19	169	304	312	145
Euphysa										
Eutonia										
Evadne s1					32					193
Fish larvae s1										
Fish larvae s2					•					
Fish larvae s3	•	•	•		•	•	•	•	•	•
Fritillaria s1										48

OE8805 (cont.)	Stn 57–1	Stn 57–2	Stn 57–3	Stn 57–4	Stn 57–5	Stn 59–1	Stn 59–2	Stn 59–3	Stn 59–4	Stn 59–5
Depth of haul:	91–75	75–49	49–30	30–8	8–0	85–76	76–51	51–31	31–9	9–0
Gastanus intermedius 6f										
Gastropod veligers s1										48
Holmsiella anomola s3										
Hyperia s1	5		10		16	8				
Hyperiidae s1									•	
Hyperoche medusarum s2										
Hyperoche medusarum s3										
Isopoda s1								23		
Limacina s1										
Medusae s1										
Medusae s2	•									
Mesocalanus tenuicornis 5										
Metridia 1–4	20	32				19	15			
Metridia pacifica 1–4	30					6	4			
Metridia pacifica 6f	35	32				31	26			
Metridia pacifica 6m	35	39	10			37	37			
Metridia pacifica 6f	25	8	10		32	50	18	23		
Metridia pacifica 6m	288	24				168	26	11		
Microcalanus pygmaeus pusillus	91	8				56	29			
Microcalanus pygmaeus pusillus	56	126				62	51			
Microcalanus pygmaeus pusillus	15	8					4			
Muggiaea s2			•	•	•		•			
Nematoda s2					•					
Nematoda s3		•								
Neocalanus cristatus 5									•	
Neocalanus plumchrus 5										
Oikopleura s1			10		64				24	966
Oikopleura s2	•	•				•	•	•		
Oithona atlantica 1–5					16					
Oithona atlantica 6f										
Oithona similis 1–5	142	24				19	26	17		97

OE8805 (cont.)	Stn 57–1	Stn 57–2	Stn 57–3	Stn 57–4	Stn 57–5	Stn 59–1	Stn 59–2	Stn 59–3	Stn 59–4	Stn 59–5
Depth of haul:	91–75	75–49	49–30	30–8	8–0	85–76	76–51	51–31	31–9	9–0
Oithona similis 6f		110	69	126		205	121	242		
Oithona similis 6m				16			11	6		
Oncaea conifera 6f										
Pagurid megalope s2					•				•	•
Pagurid zoea s2	•	•	•		1	•	•	•	•	•
Pagurid zoea s3										
Pandalidae s1										
Pandalidae s2	•		•		•					
Pandalidae s3	•				•					•
Pandalus jordani	•									
Paracalanus parvus 6										48
Paracalanus parvus 6f										193
Paracalanus parvus 6m										
Parathemisto pacifica f	•	•	•	•	•	•	•		•	
Parathemisto pacifica m	•		•	•		•	•			
Parathemisto pacifica s1										
Pasiphaea pacifica s3										
Phialidium s2			•						•	
Phialidium s3	•	•	•	•		•			•	
Pleurobrachia s2					•		•		•	1
Pleurobrachia s3										
Pleuromamma xiphias 6f										
Pleuronectidae										
Podon s1										48
Polychaete s2										
Polychaete larvae s1										
Polychaete trochophores s1										193
Porcellanidae zoea s1		8								
Primno s1										
Primno abyssalis f										
Primno abyssalis m										

OE8805 (cont.)	Stn 57–1	Stn 57–2	Stn 57–3	Stn 57–4	Stn 57–5	Stn 59–1	Stn 59–2	Stn 59–3	Stn 59–4	Stn 59–5
Depth of haul:	91–75	75–49	49–30	30–8	8–0	85–76	76–51	51–31	31–9	9–0
Primno abyssalis s1										
Primno abyssalis s2										
Probiosdactyla s2										
Pseudocalanus min/el 1–4	5		10	63	113		4	17	337	145
Pseudocalanus min/el 5f	10	95	79	487	918	37	29	73	529	580
Pseudocalanus min/el 5m	20	102	158	675	676	31	44	130	697	676
Pseudocalanus min/el 6f	258	1111	866	895	419	304	345	1038	2428	1401
Pseudocalanus min/el 6m	101	882	1142	361	97	155	315	1026	649	48
Racovitzanus antarcticus 6f										
Sagitta elegans s2										
Sagitta elegans s3	3	11	21	12	2	9	31	10	2	•
Sarsia s2					•					•
Sarsia s3										
Scolecithricella minor 5										
Scolecithricella minor 6f		8								
Scolecithricella minor 6m										
Thysanoessa longipes f		•								
Thysanoessa longipes m	•	•								
Thysanoessa raschii f									•	
Thysanoessa raschii m			•		•			•		
Thysanoessa spinifera f	•	•	•	•	•		•	•	•	•
Thysanoessa spinifera m	•	•	•	•		1	•	•	•	
Thysanoessa spinifera s2	•		•	8	5	•	•	2	5	6
Tomopteris septentrionalis s3										
Unclassified eggs	15		108	408	1723	19	18	73	697	3236

TABLE 10 (cont.)

Bioness oblique net haul: animals.m-3

* Taxa present in concentrations of less than 1.m-3

	Stn 61-1	Stn 61-2	Stn 61/3	Stn 61-4	Stn 61-5	Stn 64-1	Stn 64-2	Stn 64-3	Stn 64-4	Stn 64-5
Depth of haul:	90-75	75-49	49-30	30-7	7-0	90-75	75-50	50-30	30-10	10-0
Taxon:										
Acartia 1-4	5	11		502					186	2320
Acartia clausi 6f					83					
Acartia longiremis 5	5	3	16	84	165	6		10	120	747
Acartia longiremis 6f	5	8	40	134	358	12	10	10	197	507
Acartia longiremis 6m	5		16	100	248	3		10	164	107
Aegina s2										
Aglantha s2										
Aglantha s3										
Barnacle cypride					55					53
Barnacle nauplii	5	3			936		3			347
Bivalve veligers	9		32			22			22	213
Brachyuran megalope s1										
Brachyuran megalope s2									*	
Brachyuran megalope s3										
Brachyuran zoea s1		8			55					
Brachyuran zoea s2	*									*
Calanoida 1-3 (unidentified)	27	19	89	1723			22	38	897	2240
Calanus 1-3	5		48	33	138		6	76	55	107
Calanus marshallae 4	5	3	8	17	55		16	19	11	27
Calanus marshallae 5	54	8	8	17	165	18	86			
Calanus marshallae 6f	5	8	8	50	83	95	64	10		
Calanus marshallae 6m	9	6			28	6	6			
Calanus pacificus 5				33			6			
Calanus pacificus 6f						3	3			
Candacia columbiae 6f										
Candacia columbiae 6m										
Caridean mysis s1					55					

OE8805 (cont.)	Stn 61–1	Stn 61–2	Stn 61/3	Stn 61–4	Stn 61–5	Stn 64–1	Stn 64–2	Stn 64–3	Stn 64–4	Stn 64–5
Depth of haul:	90–75	75–49	49–30	30–7	7–0	90–75	75–50	50–30	30–10	10–0
Caridean mysis s2	•	•	•	•	•	1	•	•	•	2
Caridean mysis s3	•	•	•	•		•	•			
Caridean zoea s1										27
Centropages abdominalis 1–4										
Centropages abdominalis 5					55				22	27
Centropages abdominalis 6f					165					53
Centropages abdominalis 6m				17	83					53
Chaetognath juvenile s1										27
Chaetognath juvenile s2	1	•	1	2			3	•	1	2
Chaetognath juvenile s3					2	•				
Chaetognatha s2										
Chaetognatha s3	•		•			2	•	•		
Chiridius gracilis 5										
Chiridius gracilis 6f										
Conchoecia s1										
Copepod nauplii		28	121	33	606	9	3	57	88	640
Corycaeus anglicus 5				17						
Corycaeus anglicus 6f										
Corycaeus anglicus 6m								10	11	
Crangonidae s2	•							•		
Crangonidae s3										
Ctenocalanus vanus 5										
Ctenocalanus vanus 6f										
Cumacea s3										
Cyphocaris s1										
Cyphocaris challengeri s2	1	•	•	•		•	•		•	
Cyphocaris challengeri s3			•							
Cyphonautes larvae										
Echinoderm pluteus s1				50	110					53
Epilabidocera longipedata 1–4										
Epilabidocera longipedata 5										

OE8805 (cont.)	Stn 61–1	Stn 61–2	Stn 61/3	Stn 61–4	Stn 61–5	Stn 64–1	Stn 64–2	Stn 64–3	Stn 64–4	Stn 64–5
Depth of haul:	90–75	75–49	49–30	30–7	7–0	90–75	75–50	50–30	30–10	10–0
Epilabidocera longipedata 6m										
Eucalanus bungii 6f										
Eucalanus bungii 6m							•			
Eucalanus bungii 6f	•				•	•	•			•
Eucalanus californicus 6f										
Euchaeta 3										
Euchaeta 4										
Euchaeta elongata 4										
Euchaeta elongata 5f										
Euchaeta elongata 5m										
Euchaeta elongata 6f										
Euchaeta elongata 6m										
Eukrohnia hamata c2	•	•					•			
Eukrohnia hamata c3	•	•				2	•			
Euphausia pacifica f	•		•			•				
Euphausia pacifica m						6				
Euphausia pacifica c1										
Euphausia pacifica c2	3	1	2	3	2		•			
Euphausia pacifica c3										
Euphausiacea										
Euphausiid calyptopis c1										
Euphausiid furcilia c1							3		11	
Euphausiid juveniles c2							•	•		
Euphausiid naupii	36	136	242	318	386	37	38	487	241	373
Euphysa										
Eutonia		•							•	
Evadne c1					633					133
Fish larvae c1							•			
Fish larvae c2				•				•		
Fish larvae c3	•	•	•	•	•	•	•			•
Fritillaria c1										

OE8805 (cont.)	Stn 61–1	Stn 61–2	Stn 61/3	Stn 61–4	Stn 61–5	Stn 64–1	Stn 64–2	Stn 64–3	Stn 64–4	Stn 64–5
Depth of haul:	90–75	75–49	49–30	30–7	7–0	90–75	75–50	50–30	30–10	10–0
Gastanus intermedius 6f										
Gastropod veligers e1			8					10	11	
Holmsiella anomola e3										
Hyperia e1				17					22	
Hyperiidae e1										
Hyperoche medusarum e2										•
Hyperoche medusarum e3							6			
Isopoda e1										
Limacina e1	6							19		27
Medusae e1										
Medusae e2										
Mesocalanus tenuicornis 5										
Metridia 1–4	18					9	25			
Metridia pacifica 1–4	14						6			
Metridia pacifica 5f	50	8				25	16			
Metridia pacifica 5m	56	36				231	10			
Metridia pacifica 6f	63	8	8			66				
Metridia pacifica 6m	221	33				225	3			
Microcalanus pygmaeus pusillus	36	14				62	13			
Microcalanus pygmaeus pusillus	18	33	8			25	22			
Microcalanus pygmaeus pusillus	14	8				15	6			
Mugglaea e2				•						
Nematoda e2										
Nematoda e3										
Neocalanus cristatus 5				•						
Neocalanus plumchrus 5										
Oikopleura e1				17	466		3			53
Oikopleura e2	6	•	•	•		3	•	•	•	
Olthona atlantica 1–5										
Olthona atlantica 6f			8							
Olthona similis 1–5	77			50	55	102	25		66	

OE8805 (cont.)	Stn 61–1	Stn 61–2	Stn 61/3	Stn 61–4	Stn 61–5	Stn 64–1	Stn 64–2	Stn 64–3	Stn 64–4	Stn 64–5
Depth of haul:	90–75	75–49	49–30	30–7	7–0	90–75	75–50	50–30	30–10	10–0
Oithona similis 6f	122	58	121	84	110	6	99	172		27
Oithona similis 6m	9	11	16				13	10		
Oncaea conifera 6f										
Pagurid megalops s2			•							
Pagurid zoea s2	•		•	•		•	•	•		•
Pagurid zoea s3	•									
Pandalidae s1										
Pandalidae s2	•	•								
Pandalidae s3	•		•	•					•	
Pandalus jordani										
Paracalanus parvus 5				17				10		53
Paracalanus parvus 6f								19	11	107
Paracalanus parvus 6m										
Parathemisto pacifica f	•	•	•	•		•				
Parathemisto pacifica m	•	•	•	•						
Parathemisto pacifica s1							10			
Pasiphaea pacifica s3										
Phialidium s2		•			•				•	•
Phialidium s3	•	•	•	•	•	•	•	•		•
Pleurobrachia s2				•	2			•	•	2
Pleurobrachia s3									•	•
Pleuromamma xiphias 6f										
Pleuronectidae										
Podon s1										
Polychaete s2										
Polychaete larvae s1										
Polychaete trochophores s1	5									
Porcellanidae zoea s1										27
Primno s1										
Primno abyssalis f										
Primno abyssalis m						•				

OE8805 (cont.)	Stn 61–1	Stn 61–2	Stn 61/3	Stn 61–4	Stn 61–5	Stn 64–1	Stn 64–2	Stn 64–3	Stn 64–4	Stn 64–5
Depth of haul:	90–75	75–49	49–30	30–7	7–0	90–75	75–50	50–30	30–10	10–0
Primno abyssalis e1										
Primno abyssalis e2										
Probiosdactyla e2										
Pseudocalanus min/el 1–4	14		72	84	138	9	6	38	142	320
Pseudocalanus min/el 5f	41	14	169	251	330	31	22	220	669	1680
Pseudocalanus min/el 5m	32	26	97	318	523	25	32	229	188	1040
Pseudocalanus min/el 6f	196	208	853	2125	881	98	503	1022	645	1520
Pseudocalanus min/el 6m	63	263	829	1037	165	25	194	1099	361	187
Racovitzanus antarcticus 6f										
Sagitta elegans e2										
Sagitta elegans e3	18	13	5	1	•	111	11	•	•	•
Sarsia e2					•		•			
Sarsia e3										
Scolecithricella minor 5							3			
Scolecithricella minor 6f							6			
Scolecithricella minor 6m										
Thysanoessa longipes f										
Thysanoessa longipes m										
Thysanoessa raschii f										
Thysanoessa raschii m			•							
Thysanoessa spinifera f		•	•	•			•			
Thysanoessa spinifera m	•	•	•	•	•	•				
Thysanoessa spinifera e2	•	•	1	2	8	2	•	•		
Tomopteris septentrionalis e3										
Unclassified eggs	27	14	209	602	908	15	38	210	284	7627

TABLE 10 (cont.)

Bionese oblique net haul: animals.m-3

* Taxa present in concentrations of less than 1.m-3

	Stn 65-1	Stn 65-4	Stn 65-5	Stn 65-6	Stn 65-7	Stn 75-1	Stn 75-2	Stn 75-3	Stn 75-4	Stn 75-6	Stn 75-7
Depth of haul:	121-104	99-74	74-49	49-28	28-0	121-99	99-76	76-50	50-34	34-10	10-0
Taxon:											
Acartia 1-4					711				5	232	776
Acartia clausi 6f					21						
Acartia longiremis 5	1		2	7	982	8			24	150	520
Acartia longiremis 6f	1	2		28	794	11	8	8	43	240	328
Acartia longiremis 6m	3			14	669	11		3	24	269	376
Aegina s2						*	*				
Aglantha s2		*				*					
Aglantha s3						*			*	*	
Barnacle cyprids							4				16
Barnacle naupli	3		7			3		3		22	8
Bivalve veligers			2		63			6	43	15	
Brachyuran megalops s1											
Brachyuran megalops s2											
Brachyuran megalops s3									*		
Brachyuran zoea s1		2			126	3			14		16
Brachyuran zoea s2					*	*	*			*	4
Calanoida 1-3 (unidentified)			2	117	585	19			43	75	336
Calanus 1-3				21	63				47	30	32
Calanus marshallae 4			7		*	5	8		5		
Calanus marshallae 5	3	2	2			3	8	3	5	7	
Calanus marshallae 6f	4	8	31	4				11	19	7	
Calanus marshallae 6m	1	4	11			14	8	3	5	15	
Calanus pacificus 5			2								
Calanus pacificus 6f			9								
Candacia columbiae 6f						3					
Candacia columbiae 6m							4				
Caridean myels s1											

OE8805 (cont.)	Stn 65–1	Stn 65–4	Stn 65–5	Stn 65–6	Stn 65–7	Stn 75–1	Stn 75–2	Stn 75–3	Stn 75–4	Stn 75–6	Stn 75–7
Depth of haul:	121–104	99–74	74–49	49–28	28–0	121–98	98–76	76–50	50–34	34–10	10–0
Caridean mysis c2	8	•	•	1	2	•	•	•	•	•	7
Caridean mysis c3	•	•	•		•					•	•
Caridean zoea c1											24
Centropages abdominalis 1–4											
Centropages abdominalis 5					42						
Centropages abdominalis 6f					21						
Centropages abdominalis 6m										22	
Chaetognath juvenile c1											
Chaetognath juvenile c2			•	•	•	•			•	•	2
Chaetognath juvenile c3											
Chaetognatha c2					•			•		•	
Chaetognatha c3	1			•	•	1	•	•	•	•	
Chiridius gracilis 5						3					
Chiridius gracilis 6f						5	4				
Conchoecia c1	7	2	2			106	16	17	19	7	
Copepod nauplii		8		85	504		4	6	228	180	84
Corycaeus anglicus 5					21						
Corycaeus anglicus 6f									5		
Corycaeus anglicus 6m											
Crangonidae c2		•									
Crangonidae c3											
Ctenocalanus vanus 5											
Ctenocalanus vanus 6f											
Cumacea c3											
Cyphocaris c1	3					11	4			15	
Cyphocaris challengeri c2	16	•			•	2	•	3	3	3	5
Cyphocaris challengeri c3	1					•	•	•	•	•	
Cyphonautes larvae		4	4				6	3		7	24
Echinoderm pluteus c1					63					30	96
Epilabidocera longipedata 1–4											
Epilabidocera longipedata 5					21						

OE8805 (cont.)	Stn 65–1	Stn 65–4	Stn 65–5	Stn 65–6	Stn 65–7	Stn 75–1	Stn 75–2	Stn 75–3	Stn 75–4	Stn 75–6	Stn 75–7
Depth of haul:	121–104	99–74	74–49	49–28	28–0	121–98	98–76	76–50	50–34	34–10	10–0
Epilabidocera longipedata 6m											
Eucalanus bungii 5f		•	•	•		•	•				
Eucalanus bungii 5m			•								
Eucalanus bungii 6f		•			•	•	•				
Eucalanus californicus 6f					•						
Euchaeta 3	3	4				8					
Euchaeta 4							4		5		
Euchaeta elongata 4	15										
Euchaeta elongata 5f	10					•	8	3	•	•	
Euchaeta elongata 5m	6					3	4	•	•	•	
Euchaeta elongata 6f	17	•				2	4	5	4	2	3
Euchaeta elongata 6m	15			•		2	•	2	1	2	1
Eukrohnia hamata e2	•		•	•			•				
Eukrohnia hamata e3	1	1	•	•	•	2	•	•		•	
Euphausia pacifica f	1	•				•	•	•		4	11
Euphausia pacifica m		•				•	•	•	•	2	10
Euphausia pacifica e1											4
Euphausia pacifica e2		•			•				•	2	
Euphausia pacifica e3										•	
Euphausiacea											
Euphausiid calyptopis e1										7	8
Euphausiid furcilia e1									5		
Euphausiid juveniles e2			•	•	•					•	•
Euphausiid nauplii	3	12	40	50	293			17	81	30	
Euphysa											
Eutonia										•	
Evadne e1											15
Fish larvae e1											
Fish larvae e2					•					•	
Fish larvae e3					•				•	•	•
Fritillaria e1											

OE8805 (cont.)	Stn 65–1	Stn 65–4	Stn 65–5	Stn 65–6	Stn 65–7	Stn 75–1	Stn 75–2	Stn 75–3	Stn 75–4	Stn 75–6	Stn 75–7
Depth of haul:	121–104	99–74	74–49	49–28	28–0	121–98	98–76	76–50	50–34	34–10	10–0
Gastanus intermedius 6f						3					
Gastropod veligers e1											
Holmsiella anomola s3						•					
Hyperia e1	1	2	2	4		3	8	8			24
Hyperiidae e1											
Hyperoche medusarum s2											
Hyperoche medusarum s3											
Isopoda e1	1	4	4						9		
Limacina e1			2		•				19	15	
Medusae e1											
Medusae e2											
Mesocalanus tenuicornis 6			2								
Metridia 1–4			13			11	16		5		
Metridia pacifica 1–4		4	2				4				
Metridia pacifica 6f	9	13	2			11	8	11	5		
Metridia pacifica 6m	4	17	4			11	8	20	9	7	
Metridia pacifica 6f	167	108				64	500	262	52	15	
Metridia pacifica 6m	63	71				165	120	20	24		
Microcalanus pygmaeus pusillus	10	194	42	11		36	68	6	5		
Microcalanus pygmaeus pusillus	3	96	78	18		84	20	6			
Microcalanus pygmaeus pusillus 6m		23	4	4		14	8	3			
Mugilase e2											
Nematoda e2											
Nematoda e3							•				•
Neocalanus cristatus 6	•										
Neocalanus plumchrus 6										22	40
Oikopleura e1			2		125						
Oikopleura e2			•			•					
Oithona atlantica 1–5		2				8		3			
Oithona atlantica 6f		2			21						
Oithona similis 1–5	12	8	7	11	84	36	20	11	33	22	

OE8805 (cont.)	Stn 65–1	Stn 65–4	Stn 65–5	Stn 65–6	Stn 65–7	Stn 75–1	Stn 75–2	Stn 75–3	Stn 75–4	Stn 75–6	Stn 75–7
Depth of haul:	121–104	99–74	74–49	49–28	28–0	121–99	99–76	76–50	50–34	34–10	10–0
Olthona similis 6f	4	283	268	217	148	155	196	85	299	82	
Olthona similis 6m		2	9	14		8		3	14	15	8
Oncaea conifera 6f		2					4				
Pagurid megalope s2											
Pagurid zoea s2			•	•	• •	•					
Pagurid zoea s3											
Pandalidae s1											
Pandalidae s2											
Pandalidae s3	•								•		
Pandalus jordani											
Paracalanus parvus 5											
Paracalanus parvus 6f											
Paracalanus parvus 6m											
Parathemisto pacifica f	16	3			•	2	2	3	•	•	3
Parathemisto pacifica m	6	2			•	•	•	1	•	•	3
Parathemisto pacifica s1	3		9			3	4	3	6		
Pasiphaea pacifica s3							•	•			
Phialidium s2			•				•		•		
Phialidium s3					•				•		
Pleurobrachia s2					•						
Pleurobrachia s3											
Pleuromamma xiphias 6f	•										
Pleuronectidae											
Podon s1					21						
Polychaete s2											
Polychaete larvae s1							4	3	6		8
Polychaete trochophores s1											
Porcellanidae zoea s1					42				5		
Primno s1	3	2									
Primno abyssalis f	2	•	•		•	•	•	•		•	
Primno abyssalis m	1		•			•	•	•	•	•	

OE8805 (cont.)	Stn 65–1	Stn 65–4	Stn 65–5	Stn 65–6	Stn 65–7	Stn 75–1	Stn 75–2	Stn 75–3	Stn 75–4	Stn 75–6	Stn 75–7
Depth of haul:	121–104	99–74	74–49	49–28	28–0	121–98	98–76	76–50	50–34	34–10	10–0
Primno abyssalis e1						3					
Primno abyssalis e2	1						•	•	•	•	
Probleodactyla e2										7	8
Pseudocalanus min/el 1–4				4	42						
Pseudocalanus min/el 6f		4	4	18	376		4		28	7	32
Pseudocalanus min/el 6m		6	7	7	188		4		26	67	168
Pseudocalanus min/el 6f		12	40	363	711	33	56	130	299	427	328
Pseudocalanus min/el 6m			7	153	334	8	16	14	161	202	248
Racovitzanus antarcticus 6f						6	•				
Sagitta elegans e2											
Sagitta elegans e3		26	18	•	•	•		•	6	6	17
Sarsia e2											
Sarsia e3											
Scolecithricella minor 5	3		7								
Scolecithricella minor 6f	1		7			3	4	6			
Scolecithricella minor 6m	1										
Thysanoessa longipes f											
Thysanoessa longipes m										•	•
Thysanoessa raschii f										•	
Thysanoessa raschii m										•	•
Thysanoessa spinifera f		•						•			
Thysanoessa spinifera m										•	2
Thysanoessa spinifera e2			•			•			•		
Tomopteris septentrionalis e3											
Unclassified eggs	10	12	20	117	4242	14	16		142	846	368